JOHN H. PATTERSON

Pioneer In Industrial Welfare

A Companion Volume to Henry Ford's "My Life and Work," written in collaboration with Samuel Crowther

JOHN H. PATTERSON founded the National Cash Register Co. in 1884, at the age of forty. He was still the active Chairman of the Board when he died in 1922. The story of his great achievement lies in the schools, the playgrounds, the clubs, the gardens, the parks, the model factories, the government of Dayton, Ohio.

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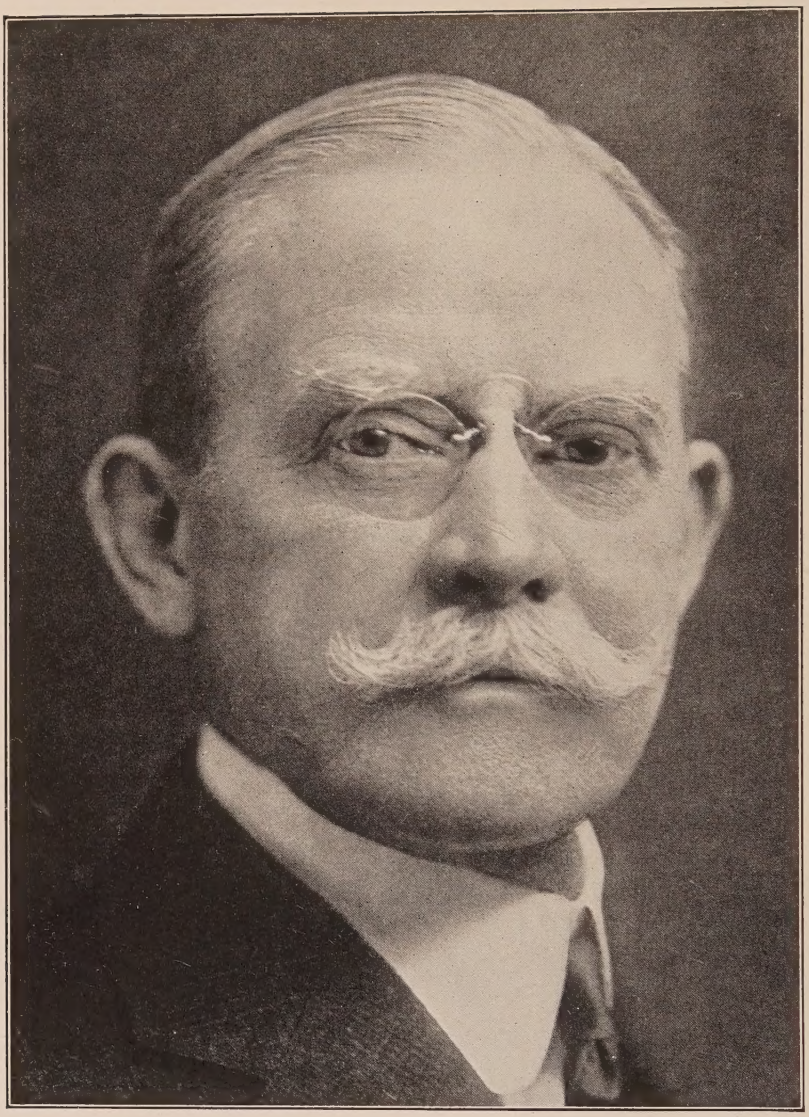


JOHN H. PATTERSON

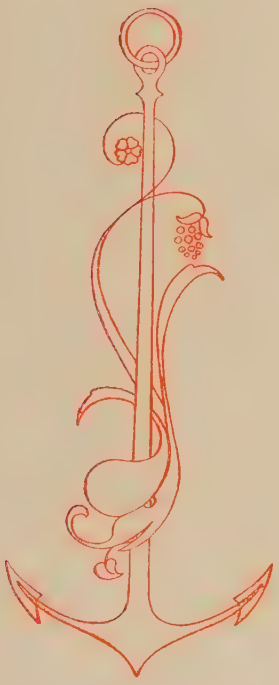
The founder of the National Cash Register Co. and a pioneer in the field of industrial welfare

JOHN H. PATTERSON

Pioneer in Industrial Welfare

BY

SAMUEL CROWTHER



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Pioneer in Industrial Welfare

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CHAPTER I

IN GENERAL

A SANDY-HEADED farm boy came back from college to conquer the world. The world had a different view. It was amused at the very notion of being conquered. The boy could find no work at all other than on his father's farm—which bothered him mightily because he could have done the chores quite as well without a higher education. He had no trade, he had no profession, he had not even the ordinary clerical knowledge to qualify as a bookkeeper—he had only a diploma and no one seemed to think that that entitled him to a job. The boy was twenty-three years old—far too old to be hunting a job in a country town. The boys who were worth anything were all placed by that time—many of them were already well settled down and heading families. For two years this boy milked the cows and hunted for the kind of job he wanted. Then he put his diploma away and went out to take what he could get.

The best that he could find was what no one else seemed to want—a job collecting tolls on a canal. It was the kind of a job well suited to a decrepit old man; the

traffic was small and the bookkeeping was elemental—just the sort of a place for one who was about to die to crawl into. Nothing could raise the salary; there was no post ahead to be promoted to. It was not necessary for the canal authorities to pay more than a bare living wage, for a collector needed to be just barely alive to do all that was required of him.

The boy who slipped into this quiet backwater of life was John Henry Patterson—a boy who could not find himself—who did not know what to do with a surging curiosity that wanted to go through everything and find everything. At twenty-five he saw his whole energy caged in a blind-alley job which asked of him not more than a fraction of what a cash register can do to-day.

The salary was not enough to live on. The exertion, mental and physical, was not enough to keep the restless lad alive. He looked for a side line. In a few months he hung out a "Coal and Wood" sign—although he had neither wood nor coal. He got a few orders and took them to a local dealer to be filled. He made a personal affair of every order and those who ordered from him once came back to order from him again. It was not a whirlwind business—not enough to justify giving up the five hundred dollars a year net that the canal paid him. His brothers, Stephen and Frank, likewise being unable to find jobs, came to help out on the coal and together the three of them managed to find money enough to lay in a small stock of coal and wood and eventually to own a delivery wagon. But it was not until six years later that the Patterson coal partnership decided that the ten dollars a week from the canal was not so important a financial item as to warrant dividing John's attention. They found it hard to give up a ten-dollar-a-week certainty. He

gave up the canal job and plunged into the coal business. Six years as a toll collector had not broken his spirit.

In another eight years the brothers had about half the retail coal business of Dayton and an active interest in several coal mines. They were prosperous in a small-town way—their methods of doing business were far ahead of those of their competitors. They were in a fair way, not to become rich, but to become soundly well-to-do and eventually pillars of the community. And if John H. Patterson had done what any ordinary man would do—decide that he had made a place for himself in the world and thereafter play safe—there would be no reason for writing this biography. His passing would have been an affair of a local news note, a funeral sermon, and a tombstone.

But it was not in the nature of John H. Patterson to be satisfied with anything. His energy, his curiosity, his desire to do something in a big way, were not dulled by years of drudgery. The years rather served to resolve his visions into a desperation for accomplishment. There were a host of things that he wanted to do, but to do them he first had to have money and power. He did not then or ever after think of money and power as an end in themselves. He wanted to serve in a big way—it was not in him to be a high private in the rear ranks. He wanted to serve as a field marshal serves his country. His people thought him full of crazy notions. They were principally anxious that he should not get the chance to make a fool of himself. He did not seem to revere precedents or even local wise men as a man of his age ought to. That was not an imaginative community. And also he had a way of not counting the cost—if he wanted to do something, he did it and checked up on the

cost afterward. And he was so everlastingly on the job that the other brothers, unless they worked in day and night shifts, could not always have an eye on him. They never sensed that John's treasury raids fitted out expeditions that brought back more than he had taken away. They lived in terror lest John should ruin them. They—and all Dayton with them—would have laughed derisively if you had told them that he had made them in spite of themselves. But John went his own course, putting through his ideas—peaceably when he could and less peaceably when he could not—and looking for a chance to do something bigger.

The opportunity to serve in a larger way came to him well disguised. An agent showed to him a rude machine called a "cash register," which by keys that punched holes in a paper tape compelled a store clerk to record the cash he took in. The Patterson brothers tried one in their mining store and changed a regular loss into a regular profit. They tried one in their retail coal office and caught a considerable leak. The machine was made by the National Manufacturing Company of Dayton and that company having decided to increase its capital from twelve thousand dollars to fifteen thousand, the three Patterson brothers took all the new stock. This was in 1883; the statement for the year was issued early in 1884 and it showed that the company had lost money. The Pattersons tried to sell their stock and they managed to get rid of all but twenty-two shares and for these they could find no buyer.

The company was the joke of the town. John H. had tired of the coal business—he wanted something new and bigger. He sold out to his brother Stephen and went West to see about buying a ranch or a fruit orchard.

He knew about cattle raising and farming—knew more about them than about anything else. He came back again in November convinced that farming was not for him and immediately bought a controlling interest in the National Manufacturing Company for sixty-five hundred dollars—which was within a few thousands of all the money that he had. He bought impulsively—he thought the cash register was a good thing. And the moment the sale got around, Patterson was the butt of Dayton. He repented just as impulsively as he had bought; the morning after the contract was drawn he went to the seller offering first one thousand dollars and then two thousand dollars to get out of the bargain. The seller replied that he would not take the stock back as a gift.

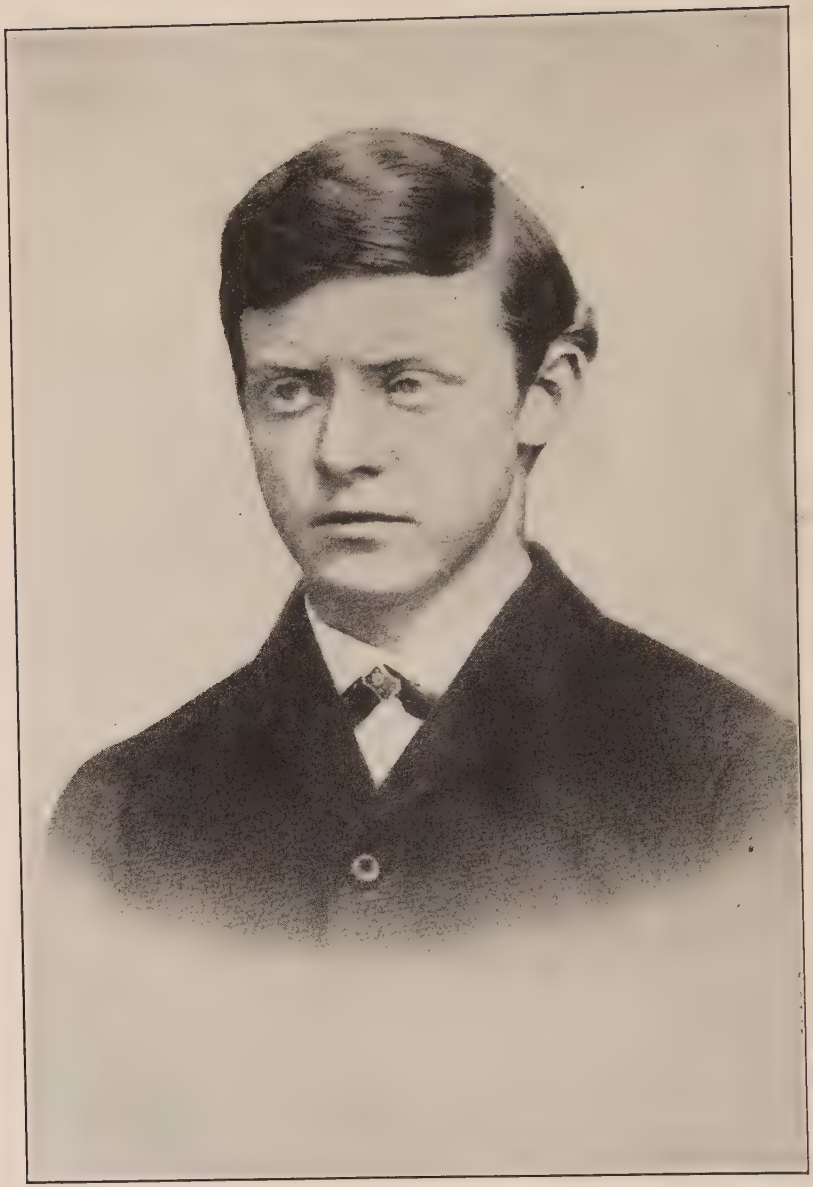
Such was the setting of John H. Patterson's opportunity. He kept his grasp on his opportunity because he could not let go. In December he changed the name of the company to the National Cash Register Company. He was forty-one years old. He was beginning business all over again with every cent he owned in a company making a product that apparently no one wanted—a company with a continuous record of failure. And Patterson was neither a manufacturer nor a salesman. But he did not again try to get out of his bargain; instead he made the cash register his life.

From that moment until the moment of his death he saw the world in terms of the cash register. He believed that his machine would make the whole world at least financially honest. He thought in terms of the good that he could do to the buyer of his machine and not of the profit that he would make for himself. The profit became and always remained a means to an end. Years afterward, when the company was making enormous

profits, Mr. Patterson for a long time refused to permit more than a 2-per-cent. dividend to be paid. He never allowed more than 6 per cent. One of the reasons for his success was that from the very first he had objectives larger than his business—he never worked for money as money. He did not believe in sharp shooting for profits. He wanted his money to come as an incident to service. One finds that men do not create success—whatever the definition of the moment may be—unless they believe in themselves and in what they are doing.

And, had not Patterson believed, he would never have carried that company through. He was alone in the belief that it could be carried through and during all his life he remained alone. He saw what he saw; and he refused to change the image in his mind because others also could not see it. He gave up everything that might even remotely interfere with the motive of his life; he came to look upon his body only as a carrier for his spirit—to be treated not as it might desire but as would best make it carry his spirit. If John H. Patterson had lived in the days of the early Christians, he would be known to-day as the founder of some austere teaching order pressing ever onward. It just so happened that he lived in a different time—and he has not been dead long enough to take on a heroic mould. Some day we shall recognize that all the servants of mankind did not write books or preach sermons or fight battles—some of them made machines that made life easier. Men do not do big things in dilettante fashion—they put their whole selves in their work, making all else subordinate. They unflinchingly accept martyrdom. They are willing to be jeered at—stoned with words—to suffer to the utmost if thereby they can spread their ideas. The cheap man thinks of business

AT TWELVE YEARS OF AGE



AT ABOUT TWENTY YEARS OF AGE

as an affair of making money. The fine man thinks of it as a service that demands his all. If he succeeds in establishing his cause, he gets money, but by that time the money has become meaningless to him.

It is necessary to get this background in mind to understand John H. Patterson—or to use the lessons that he so abundantly put into teaching. For everything that he did had an objective—an objective which grew larger as he grew, until at the end it was a very large objective indeed. It had to be a large objective because he held as his primary principle: "Good enough is the enemy of all progress." Therefore, whatever he did was but a step toward doing something bigger and better. He had more work planned ahead when he died at seventy-eight than when he began at forty-one. Many of these plans had nothing at all to do with his own business or with business in general; but he used those terms in thinking of them. He thought that well-paid wage earners and executives, living in good houses and working in pleasant shops and offices, would do better work than ill-paid men living and working in squalor. Therefore he brought about these things.

He thought that these people would do better work if they lived in a clean, well-governed community, so he started, and to a large degree succeeded in completing, the making over of the City of Dayton. He carried precisely the same ideas by degrees into the state and the federal governments and finally into the assembly of nations. The breakdown that finally brought death came through a fortnight of work at the 1920 meeting of the League of Nations at Geneva. He thought that the United States was going to suffer by not being represented. It may seem odd to relate the whole world to a single

business, but that was Mr. Patterson's elemental way; and he was right—for he knew, although he never quite expressed it, that politics is but a pastime unless it results in the provision of a greater share of goods for the people. There was only one place where he could help to provide more goods and that was in his own factory. It was not selfishness, but selflessness that led him so unerringly to cut through the buncombe and put his finger on the only reason for government. If the factory for the moment could not provide goods, then it could do something else—as when he poured out a million dollars for relief work in the Dayton flood and had it charged as a company expense. He might have spent two millions but it just so happened that in the limited time he could get rid of only a million. He used to be fond of saying, about much that he did which apparently had no concern with business: "It pays." And I have heard it said that he thus lowered the level of all that he did—that he should have been motivated by pure philanthropy. He said: "It pays" because he saw further than his critics. He saw that philanthropy was only a way of painting over rotten wood; he wanted to keep the wood from rotting.

He detested charity as such. He detested it as much as he did the pride of purse out of which charity springs. This may not seem to have much to do with business, but as a matter of fact, it has a tremendous amount to do with business, for if business is the provision of needful goods, then we have to cultivate the power to absorb these goods as well as the power to produce them. Paupers do not buy. In the later years of his life, Mr. Patterson had a personal income of about half a million dollars. He could as easily have had double that income but he preferred to have the money stay in his institution. He made

no investments of any kind. He had a modest house overlooking Dayton and a small camp in the Adirondacks. He bought a great tract of land with the idea in view of selling home sites to those who worked with him and of providing a natural park where the people of the city might get fresh air. Eventually he gave the tract to the city. He probably spent less money on himself than any rich man in the country. The remainder of his income he gave away and most of it he gave away personally with the sole idea of making better citizens, or, as he liked to put it, "making better business." He was intent on helping, not on pauperizing, and he was so intent on helping that often he insisted on minutely regulating the lives of those with whom he came in contact. He was perfectly willing to override the objections of the individual if he believed that the individual's objections were not of moment and were against the best interests both of the individual and of society. He thought there was only one best way of doing anything and that everyone ought to be taught that best way and then forced to follow it. For instance, one day on the beach at Mentone he came across a group of poor children playing in the sand. He said to his companion:

"These children have nothing to play with. They do not know how to play. Here is twenty dollars. Go up to the village and buy some buckets and shovels and things. And then this afternoon find a kindergarten teacher and pay her for six months. These children must be taught how to have a good time."

And if you had asked him about it, he probably would have said:

"It pays. Those children will not grow up into good customers unless they learn how to play."

The business that John H. Patterson took over was a fighting business. In the early eighties the hard-shell type of business man predominated. The big men of the country, aside from a few retailers and makers of necessities, were converters of raw material or railroad men. And everyone had been through the long, hard pull that began with the collapse of the 1873 Panic. Advertising was announcing. Selling was acquaintanceship. Manufacturing was the science of getting men to work for little pay. Excepting in the textiles, most manufacturing operations were done more by hand than by machine. There was no office machinery at all—the typewriter was known but it was scarcely used. Even the telephone was a rarity. The card index, the filing cabinet, the loose-leaf ledger were all but unknown. Of course there were no calculating machines. And Mr. Patterson went ahead in the belief that he could prove his machine—prove it to men who were thoroughly fixed in their ways. For there had been no particular change in office methods for a century. The store or office of 1884 was not so different from the store or office of 1784 as it is from the store or office of to-day. Patterson did not know enough about business to realize what was impossible. He struck out alone.

He saw that there was no demand. He really did not have to see it—everyone told him. Therefore, he started in to educate to create a demand. Out of that grew his whole theory of advertising—for advertising had not been previously used to sell. It had been used to announce that goods were on hand ready to be bought. He regarded advertising as a fundamental expenditure. He was the father of modern advertising.

He realized that his own people had to see his machine

as he saw it before they could explain it to others. And to this end he developed a remarkable system of simple teaching—of teaching through the eye. He made little dramas of everything that he wanted to teach—sometimes presenting them on paper and sometimes on an actual stage.

He knew that his machines would not be bought—that after the prospect had been educated, he still had to be sold to. And therefore he invented salesmanship—as distinct from order taking. He brought salesmanship to an intensive scientific basis. And thereby he changed the whole character of American business.

He recognized that the best salesmen were contented customers and so he made it a primary principle that any man who bought must not only be satisfied with the purchase but must be kept satisfied by being instructed not only how to use his machine, but also how to make money out of it. Considering his ideals, any other course was impossible to him.

He knew that to carry on an intensive programme, the men around him had to be continually working, not only to their utmost, but also in harmony. He believed that men work hardest to gain a reward or to avoid punishment. Therefore he paid salaries and commissions that at the time were unheard of. He deliberately overpaid—and as deliberately overpunished. He never kept a man—no matter what his value—after that man came to consider himself indispensable. But also he never fired a man without making a financial recompense—sometimes a most extravagant recompense. As Alvan Macauley, the president of the Packard Motor Car Company, put it to me:

"For a great many years Mr. Patterson conducted the

greatest business university in America. I am not sure it was his intention to do just that. His methods attracted ambitious and capable men from all parts of the country to his organization. When he had secured them, by the example of his tremendous energy and initiative, and through his unprecedented driving ability, he forced them very rapidly—either to the front or out the back door. The men who survived were fit. Few survived. Most of them were unable to stand the pace to maintain their popularity with the Big Chief. But all who went through his industrial university came out of it better men, abler men, and the country is dotted with leaders who secured a new conception of business possibilities from John H. Patterson."

He thought that pooled knowledge was better than scattered knowledge and hence he invented the conference idea and carried it to extraordinary lengths. And so he charted and subdivided the duties of the people who worked with him as to produce what we know to-day as a "business organization."

He considered his machine as an instrument of precision—as it later came to be. And therefore he brought about working conditions that would lead to precise work.

And finally, he knew that to carry out his ideas he must guard against arriving at a point beyond which it did not seem necessary to go—against arriving at a condition of static contentment. He used to say often that if he had to go from Dayton to New York in less time than required by the express train a new method would have to be devised for getting him there. He always wanted to do everything more expeditiously than any one else could do it. Therefore he kept his whole business in flux—he was always working on a programme extending at least

five years ahead. Every idea that seemed to have merit was tested. It was axiomatic that everything being done by his company was to the end of preparing to do it better.

He went incessantly from one end of the world to the other hunting for new ideas. During the last ten years of his life—that is, between sixty-eight and seventy-eight—he travelled more than two hundred and fifty thousand miles. He read or had read for him every business publication; if he found good ideas in a book or magazine article, he bought hundreds of copies and sent them to his executives. He was always learning and he expected everyone about him to be learning.

These principles of his did not come in a day and neither did they develop from prosperity. The National Cash Register Company, as one sees it to-day, is a tremendous institution with a financial foundation hewn deep into the solid rock. Many a man acquires his principles after he has acquired his money. Patterson acquired his success because of his principles. They were reasoned out of the bitterest of experiences. For nothing came easily to him; during the first ten years of the company there was never a moment when he could have paid his debts. The only market during those early years was the saloon market. His machine—the machine out of which he hoped to do so much—was just a contraption for catching light-fingered clerks.

Compare the product of to-day and its uses with the old "thief-catcher" period and you will gain some idea not only of the difficulty and the scope of Mr. Patterson's task, but how effective were his methods of education. He had continually to educate, uneducate, and reëducate.

And bear in mind that all of this was brought about—the great company was brought about—step by step and

by methods which, although they sound pretentious in generalization, were exquisitely simple. And they were paid for not out of some great windfall fund but out of moneys that they themselves generated. Mr. Patterson's story is not one of pushing an invention through great expenditures of capital. He did not even have a real invention to start with—he had only an idea worked into a crude patented form. He had to develop it on earnings and on borrowed money. He had to sell his idea first to borrow money and then to make sales to pay off the money he had borrowed. His sole collateral was his own faith in his idea. It is all an affair of little things combining to make a big thing.

He did little things in an unusual way—in a way to make them big. Always he went to extremes. If he had an unusual idea to put over—as, say, the standardizing of salesmen's demonstrations, which at the time was bitterly fought by the salesmen—he would insist on the letter-perfect following of methods which he knew perfectly well the salesmen could not follow. He asked the salesmen to do twice as much as he expected them to do, knowing that they would thereby be carried on to the point where he really wanted them to be—that he would at least get something, where if he asked moderately he would probably get nothing. He staged every demonstration and left nothing to chance. If he wanted to be interrupted by questions before a convention or a factory meeting, he arranged for the interruptions in advance. For instance, in a meeting where he was trying to drive home the importance of speaking in simple, exact language, he hesitated to find a word and in his apparent confusion he snapped:

"Will somebody give me the word I want?"

Somebody did, and he tossed him a twenty-dollar gold piece. It was not necessary further to demonstrate the value of language to that meeting.

The factory was having trouble getting production; Mr. Patterson called a meeting of the whole force. As he stood on the platform a line of men filed in carrying heavy sacks. It was the weekly payroll in gold and silver. They dumped it into a heap on the platform and then Mr. Patterson started to explain where the money came from and how if each did not do his part there could be no heap of money to distribute. In another meeting he began, as was his habit, calling on men here and there through the audience to speak. One man got up and started:

"I am not much of a speechmaker . . ."

"Then sit down again," interrupted Mr. Patterson.

On one occasion he was riding in a cold Pullman. He asked the conductor to discover why the car was cold. The man launched on a long explanation, the general trend of which was to show that it was not his fault. Mr. Patterson did not see how the explanation was going to heat the car. He broke in:

"Let us say it is all my fault. That is out of the way now. What can you do about heating this car?"

The business was a pushing, driving business. It had to be, else cash registers could not be sold. It had to be hammer and tongs all the while and there could not be even a suggestion that anything was impossible or that the time in which to do anything was too limited. He took a thousand ways to drive away the thought of impossibility. He held that any sum of money was well spent if only it served to impress on the people that all things were possible. About three o'clock one afternoon,

riding by Welfare Hall on his familiar white horse, he called to his general manager:

"Have this place ready to use as a riding academy by six o'clock to-morrow morning."

The building was then fitted up as a dining room. The general manager did not tell him that the time was too short, that he could not get men, and so forth. He rushed men into the place. They worked all night, and when Mr. Patterson rode down at six o'clock the next morning, not only had the floor been taken out and tan bark put in, but every trace of rubbish had been removed. The work cost fifteen or twenty thousand dollars and the place was used only once as a riding academy. In a few months it was as quickly transformed into a dining hall again.

That was just one of Mr. Patterson's ways of making an unusual job to see if the people could rise to it.

He could do big things and he could do little things. He could be very great and he could be very petty. A man never knew whether he was going to be rewarded or fired. Sometimes Mr. Patterson would take a man, shower him with compliments, increase his salary, and in the next week fire him without an explanation. One vice-president who was thus fired asked for an explanation. Mr. Patterson told him:

"No, I won't explain anything to you, because if I started to do that I might take you back again."

For a season he grew very suspicious of men who used butter and pepper. Again, he discharged men on the advice of an employee who claimed to be able to read faces.

No man could ever tell what Mr. Patterson considered important or unimportant, for he had a most remarkable memory for detail. He had no scale of relative impor-

tance. He kept the big balls and the little balls all up in the air at once. He held that nothing was too small to be done well and although he could not supervise every detail, he got around to every detail at some time or other and established its rules. And the man looking after those details never knew when Mr. Patterson would land in his department—for he never announced his coming in advance. And he was as apt as not to come in the middle of the night just to see in what condition a man left his desk and affairs at the end of the day. He could keep everything in his mind at once.

When the Dayton flood was receding and Mr. Patterson had been night and day directing the relief, a chemist who had been marooned on the other side of town reported for duty.

"I have managed to get here, Mr. Patterson," he said. "Have you anything for me to do?"

"Yes," answered Mr. Patterson. "You remember the minister's wife who used to live down below there? We got her out and she is in a house up on the hill. Just before this flood came, I was talking to her about how we could use alfalfa. Will you go up and continue that conversation and report back to me?"

There was nothing of the machine in Mr. Patterson. He was human in his frailties and again he was unhuman. At every point he was like the average man and yet unlike him. He was a continual contradiction of himself.

In no sense a business man, he was the founder of most of the practices which distinguish modern American business from all other business in the world. Not a salesman, he was the founder of modern salesmanship. Not a speaker, he was among the most effective of public demonstrators. Not a financier, he was the chief exponent

of getting money by spending money and yet not overreaching. Not a manufacturer, he was the originator of the modern American factory. Not a judge or a picker of men, he was the father of organized business and the developer of more business leaders than any other man who ever lived. Not a man of commanding personality, he was a rare leader of men, equally sure in threatened defeat or in expected victory.

It is the purpose of this book to tell the story of the man—to see how he and his methods developed. And his story is more than a story—it is a whole course in business building.

CHAPTER II

THE EARLY YEARS

JOHN H. PATTERSON believed that a straight line is the shortest distance between two points and that two plus two make four—that a thing was either right or wrong. He would not tolerate a twilight zone. He got that from his father, a stern, exact, and exacting, unimaginative Scotch-Irishman, who never forgot to say, as he sent the boys back to do over a chore or to give an extra polish to the back of their shoes as they started for church:

"Right is right and wrong is wrong."

One of Mr. Patterson's favourite stories was of a New England school teacher named Eliam Barney, who eventually owned a car shop in Dayton. One day Mr. Barney was inspecting a job that had just been finished. He turned to the workman and asked:

"Seven times seven is forty-eight, isn't it?"

"No," answered the man indignantly.

"Well, then," continued Barney, "you have made this pretty nearly right. Now go ahead and make it exactly right."

At another time Barney was about to ship a train of cars —he built railroad cars. Giving them a final inspection, he noticed that a lock had in it three screws of one kind and one of another. He held up the whole train until the proper screw was found and put in.

"He wanted to teach them by example," Mr. Patterson

always said, when telling of this incident, and he told it frequently. "He wanted to show that everything had to be right, and he was the first man in Dayton that had first-class, up-to-date methods of doing business."

Barney was one of Mr. Patterson's models. Another was Adam Schantz, a brewer.

"He was the greatest temperance man I ever knew," said Mr. Patterson. "He came from Germany where they make good beer, and he continued to make the best beer he could until he found out that water was better than beer. Then he took the limestone out of Dayton water and called it 'Lily Water.' He advertised it all over the country and he made a success. He took pride in his work. He would have nothing but the best. He used to take me out through the woods when I was a child and tell me about the flowers and trees. He was the first to tell me about trees and flowers."

Another man whom Mr. Patterson admired was "Old Man Bishop," one of his professors at Miami University, at Oxford, Ohio, where he went to school for a while.

"There we learned how to teach," said Mr. Patterson. "The old man used to teach by making us teach each other. He was in a way the founder of our guaranteed-territory idea. I saw many years later that if an agent taught the people of a territory to need cash registers it was neither good nor fair business to allow any other agent to sell in that district. Bishop was a Scotchman, and the Scotch are the best teachers in the world because they study arithmetic. They learn that two and two don't make three. Bishop would point to one man and ask him a certain question and he would answer as best he could. Then he would point to another and another until finally the right boy had told the right thing. Then Bishop would just

smile and go ahead. That is the only way we knew that the right answer had been given."

That is the method Mr. Patterson himself used in all his conventions and meetings. It was at the very foundation of his policy of pooling the company's brains. As he once said at a convention:

"We bring all of you people together and we ask one person and another person to get up and talk and then we ask for criticisms and suggestions.

"Now, why do we do that? We couldn't do that if we didn't have guaranteed territories. You people wouldn't be here to teach others to go into your territory and sell goods in your territory and get all the benefit of what you know. You would keep everything to yourselves. Guaranteed territory prevents all that and therefore you are able to come here and help each other."

It was on such simple, elemental common sense that Mr. Patterson based his every action. He said:

"It pays to be honest, truthful, straight—to say what you mean and mean what you say."

No one can possibly disagree with that. Probably no man ever lived who did not at some time or other solemnly say almost the same thing, but when Mr. Patterson spoke a truism it became a rule of conduct which could not be deviated from in the slightest particular. He could not have said: "A good man is honest, truthful, straight—he says what he means and means what he says." He would have taken that as a mere abstraction. He took "It pays" as a reason for being honest and truthful, not because he did not appreciate that there were other reasons, but because "It pays" are words which any grade of intelligence can understand.

All his reasoning was likewise direct and simple. He

reasoned in the syllogisms of logic. For instance, the whole cash-register business resolved itself into this:

"Every merchant must account for cash.

"The cash register accounts for cash.

"Therefore every merchant needs a cash register."

He would reason from the particular to the general or from the general to the particular in the precise manner of the logicians. There were no two ways about any conclusion—it was either true or untrue. That is why he made changes so rapidly—he would make a swooping change after an investigation of, say, one phase because, as he put it: "If I break an egg at one end and find it rotten, there is no use looking at the other end. It will be rotten, too."

You will find every fundamental from which he worked grounded in his early precepts and experiences. The big principles of his business were learned from ordinary, simple incidents such as happen to any one. To Mr. Patterson's type of mind every happening held some kind of a lesson. He did not originate—he applied the lessons drawn from one set of circumstances to an entirely different set of circumstances. He was the finest of all examples to contradict the plaintive "But my business is different." His manner of thinking precluded that view; he looked at the Pyramids of Egypt not merely as world wonders but to see what he could learn from them to use in his own business. The Pyramids came to be a part of his business. Once when he went to a Yale-Harvard football game he came back to the factory and gave a two-hour talk on team play. He told the game in terms of the N. C. R. work.

Take, for instance, his ancestors. He had an almost Chinese veneration for his ancestors—but not because

they were dead. He revered them as people who had, by their lives, taught something to him. He studied them—he found out all he could about them—to discover what was in their lives that he could use in his. He had something of all of his ancestors in him. He was proud of his ancestors. When he was fighting his battles, he liked to think of them fighting their battles. On the crest of his father's family is "*Pro rege et grege*" (For king and people) and on that of his mother's family is "*Semper paratus*" (Always ready). Those legends became rules with him. He thought of himself as a pioneer and also as a conqueror. When, later in life, he rode a white horse, it was because Napoleon's horse was white. You will see this spirit carried through everything that he did. He held that a man could be as much a conqueror in peace as in war, and although he was thoroughly democratic in insisting upon equal opportunity for all, he was at heart an aristocrat going out to fight and to found a commercial kingdom.

All his ancestors were fighters. They fought in the War of the Revolution and in every war thereafter. The Pattersons, in the person of John Patterson, whose grandfather had left Scotland in 1640 on account of religious persecution and settled in the north of Ireland, came to America sometime about 1700 and settled in Lancaster, Pa. He left a son, Robert, and his son, Francis, became the father of Colonel Robert Patterson who, of all his ancestors, was the one that John H. Patterson most talked about. Colonel Patterson, his grandfather, fought through the Revolution and then, continuing as a lieutenant in the service, he was ordered to strengthen the frontiers of the colonies along the Kentucky River. He married Elizabeth Lindsay, a daughter of a Scotchman who settled along the Conococheague Mountain in Pennsylvania, and

then proceeded with her across Pennsylvania to Fort Pitt (Pittsburg) and down the Ohio River to Kentucky. He built a log house in Lexington—the first in Lexington. This house was removed some twenty years ago to Dayton by Mr. Patterson. For Colonel Patterson's services in the famous Clarke Expedition into Illinois, the Government gave him a grant of land which he located around Lexington. Later with two associates he bought another tract, which is now the site of Cincinnati, Ohio. They called the settlement Losantiville. Let John H. Patterson tell about the Colonel in his own way—for he was one of his heroes and he has shown to thousands of people the powder-horn, etched with pictures of three Indian battles, that Colonel Robert carried when associated with Daniel Boone. These are stenographic notes made at an N. C. R. convention ten years ago, when Mr. Patterson went more extensively into his family history than at any time before or since. It gives an idea of his unending search for lessons out of the past to use in the present.

"Now they had battles in those days to overcome the savages. The land was too valuable and the savages required too great an amount for each person. It was then decided that one half acre of ground was enough for one person to subsist on. They had their battles and their difficulties and we have ours. We have ignorance and bad habits and many other things to fight in this generation. I would just as lief—in fact, I would rather—be killed by a bullet or a tomahawk or a knife of an Indian than be killed by some of the awful enemies of humanity.

"Does welfare work pay? Why did this man come here at the battle of Blue Licks and put my grandfather on a horse after he had been struck by a tomahawk and let

him escape? That was my earliest experience, and I believe that welfare work pays.

"Now this was in 1776. It occurred right through this section of the country. I will tell you why this man saved my grandfather's life. A little army of about seventy-five men were going out in Illinois to capture a French fort. One man named Reynolds was always swearing unnecessarily. My grandfather told him that if he would not swear until they reached the fort he would give him a prize. Reynolds took him up on one condition—that the prize would be a quart of whiskey.

"When they got to the fort my grandfather had forgotten about this promise, but Reynolds came up and claimed his quart of whiskey. My grandfather gave it to him. That act changed this man's life. From that time forward he became a member of the church in Kentucky and was a model man in every way.

"He felt grateful to my grandfather, and at this battle of Blue Licks he made up his mind to save my grandfather's life even at the risk of his own. My grandfather didn't get the word to retreat, the Indians surprised and attacked him, and he was the last man near the Indians. He escaped by Reynolds giving him his horse. An Indian came up to Reynolds and he sat down beside him on a log. He saw that there was no powder in the Indian's gun so he stooped down and laced his shoe. He jumped up unexpectedly, hit the Indian on the head, and ran back to the fort. These are some of the things that our ancestors did. They went through all this part of the country—Ohio, Kentucky, and Indiana.

"This room was known as Patterson's room. (Showing a picture of the old log house.) It was here that my grandmother hid in the loft. It was known as Patterson's room

because there was only one room. It was used for a port house. Here is the latch string. They pulled it in at night so nobody could get in, and when they said, 'The latch string is always out for you' it meant you were always welcome. I heard they were going to destroy this cabin so I brought it over here and restored it.

"My grandfather left Kentucky for two reasons—one was because he had gone security for a man and had to sell all his property, the other was because he wanted to teach his boys to work. He couldn't teach them to work down South because of the slaves, so he came up here.

"Then he located on this farm where the N. C. R. now stands, because he wanted to be a manufacturer. He named the place 'Rubicon.' After he had bought it the former owner kept sending back for bushes, trees, and other things. My grandfather didn't think it was fair, so the next time this man sent his wagon to get some more bushes he turned the ox cart around down at the brook, which was a boundary, and said: 'Tell Cooper that this is the Rubicon, and I don't want his ox team taking anything off this farm.' The farm was called the Rubicon Farm ever after.

"Many a time I have worked, where this factory now stands, cutting hay and ploughing corn. When I was a little child we carried food to the harvesters and always spread the tablecloth under this old elm tree. I remember the German girl and I walked from the house over the creek and down under this elm tree because in those days people thought they had to have something to keep up their strength between breakfast and noon. This lunch generally consisted of hot coffee with cream and sugar and some kind of pie and then they always had to

have some kind of a stimulant, either whiskey or beer, usually whiskey."

In 1799 Colonel Patterson first visited the Miami Valley and five years later he bought a large tract of land south of Dayton which had on it a substantial log cabin. Later he built a brick house, which is still standing, west of Brown Street, south of N. C. R. factory. The Colonel had ten children, of whom Jefferson Patterson, born in 1801, was the youngest. In 1833 Jefferson married Julia Johnson of Piqua, Ohio, the daughter of Colonel John Johnson, who was the man that first gained the confidence of the Indians inhabiting Ohio and who probably more than any other one man was responsible for the peaceful settlement of Ohio. He was a rare diplomat and kept the Indians on the Miami Valley from rising to help the British in the War of 1812. The Pattersons were fighters; the Johnsons were negotiators—but fighters when they had to be.

Jefferson Patterson and his wife eventually went to live on the Rubicon Farm and there John Henry was born on December 13, 1844. He was the seventh of eleven children. But if there is any luck in the number seven, John Patterson's came well diluted. His father was forty-three and his mother thirty-two years old when he was born. The eldest brother, Robert, was born in 1833 and died while employed at work for the company. Elizabeth Jones was born in 1841 and died eight years later of cholera. William Lindsay was born in 1839 and Stephen J. in 1842. Following John came Catherine Phillips in 1846, Francis J. in 1849, Arthur Stewart in 1852, and Julia, afterward Mrs. J. H. Crane, in 1857. Two children died in infancy: John Johnson born in 1835 and Rachel born in 1837.

The family was well fixed. Everybody about the place had to work—which was the principal reason why they were well fixed. Jefferson Patterson thoroughly believed in work. He was perfectly willing to set a task for the mere doing of it—which was not John's way at all. He wanted to work to an end. His mother supplied the imagination to the household. She used to read to John from Washington Irving's tales of travel and supplied the practical note which he insisted upon by impressing on him that if he worked hard and earned money he, too, could go out in the world and travel and meet people. Young Patterson did not like the farm—excepting in retrospect. He believed that a man brought up on a farm was better than one who had not been. He said that a farm was the place of places to learn to work, and later when he came to selecting men he never put full confidence in any man who was not born on a farm. If he had to choose between two men for a place and their abilities were apparently equal, he would invariably select the man with farm experience.

John was a strong, sinewy lad of remarkable endurance —all of which he needed—for, according to his mother: "He used to be called at four o'clock in the spring, summer, and fall. He had to make his grandfather's fire, carry up enough wood to last all day, split kindling and get it ready for the night. After breakfast he would turn the calves out, put up his dinner, and go to school. In the evening he drove up the calves, fed and bedded them, carried up wood to fill the boxes, and after supper studied lessons."

He went to school in a little schoolhouse that stood on the corner of Main and Brown streets on the site to which he afterward transferred Colonel Robert's cabin from

Lexington, Ky. He went on from elementary studies to the old Central High School in Dayton, from which he graduated in 1862. Then he entered the Miami University at Oxford. The war was on. His three brothers were in the army. His father died at a session of the State Legislature and in 1863 John had to come home and take care of the farm. Catherine died within a month of her father. When President Lincoln issued his call for volunteers to serve for a hundred days, John went out with the 131st Ohio Volunteer Infantry. The regiment got only as far as Baltimore and did not see any active service. He was discharged in August, 1864. The next year he entered Dartmouth and in 1867 was graduated as a Bachelor of Arts. In the meantime, his brother William had died of war injuries.

Of Dartmouth he said: "What I learned mostly was what not to do. They gave me Greek and Latin and algebra and higher mathematics and Edwards on the Will —all useless. My mother told me about Mr. Barney being such a good manufacturer because he was such a good school teacher. I decided then that I would teach school as a way of becoming a good manufacturer. I spent three months of my vacation teaching school. I left Dartmouth College and went up in back of the mountains. There I learned how to make everything simple and plain. I learned how to use small words and big ideas."

John was not a bright boy or a good student in the ordinary sense. He, of course, was not stupid but he never could discover the use of knowledge as knowledge —he wanted it applied to something human. When he went to school and college, teaching was very far removed from life. A learned man was one who could reel off reams of poetry or who had a vast fund of encyclopædic

knowledge—which was not necessarily related to anything in particular. Mr. Patterson's whole educational programme in later years was based upon what the schools and colleges failed to teach him when he was young.

He came home from Dartmouth with a strong prejudice against colleges and college men. He never got over that prejudice.

At home things were much as they had always been, and John just slipped back into the old rut. He could not find a job outside. He helped around the farm and the grist mill and for a time ran the farm store. In 1868 the whole family came down with a fever and Arthur Stewart died. John was nurse and family head. The keeping of accounts bothered him. He wanted everything certain but everything was slipshod. It might not have bothered a man who understood bookkeeping, but John knew nothing of account books and was not even quick at figuring. His was a directing type of mind that could plan every detail, but could execute few of them with clerical neatness. And that type of mind is very unhappy when it has to pore over petty detail tasks. Everything irked him:

"If you had been through what I have been through on the farm! We had a store and we sold ham, generally a side of ham at a time; we sold flour, cornmeal, sugar, and things of that kind to our tenants and people that worked for us. Money was scarce. We wouldn't see any for some time. A man would work for us and say: 'I want some sugar'; and then I would be eating my dinner and some person would say: 'Did you charge that sugar to Souders?' 'No, I did not.' 'Well, run right away and do it.' I would like you to see some of the books that we charged it in! Often we failed to charge.

"When I think back to the old farm where I was the clerk and the proprietor, too, you might say, I know there was many a time I failed to charge. A man named Kramer kept an account with my father. They came to settle. My father pulled out a twenty-dollar gold piece and gave it to Kramer. Kramer said:

"'That is more than you owe me.'

"My father answered: 'Well, just keep it and I will owe it to you sometime.'

"A twenty-dollar gold piece meant so much. You didn't very often see that much gold at that time. When my father gave that gold to Kramer, I wondered if he would charge him on the books with it. I have wondered ever since. I often wonder how many sacks of flour I failed to charge because somebody called my attention to something else and I would forget all about it.

"Often someone would come in and say: 'I will take a side of bacon,' and how I hated to open the old black smokehouse and climb up and get a big side of bacon, push it off the nail with a stick, and let it fall on the floor so that I wouldn't get that grease on my clothes. We had our things scattered. We put our bacon in the smokehouse, molasses in the cellar, sugar in the pantry, and apples in one cellar 'way down below. We had half a dozen farmhouses and we charged the tenants nothing for their rent, cow pasture, or wood. We had to keep an account with these people. Sometimes they would get something, probably a couple of sacks of flour or cornmeal or corn down at the crib for their horses, and I would have to remember that going out to the harvest field or coming back.

"At that time we had no system of receipts. Our book of accounts was kept in a desk in the hall. We were

always forgetting to make proper records of things given out, and our books very rarely agreed with the books of our employees.

"People with whom we dealt always made sure that we credited them with the proper amount of labour, but we had no system by means of which we could be sure we had charged them with the proper amount of goods sold.

"I was often awakened at night by my father asking me if I was sure I had charged a certain person with the things he had taken home.

"Afterward, as I looked back to my experiences in keeping accounts on the farm, I realized that mistakes mean a loss to the seller and not to the buyer.

"When I grew older, I was frequently in charge of the saw and grist mills which we had on the farm, where we sawed lumber and ground grain for the neighbours. We tried to keep our accounts correct, but we were continually forgetting to charge people with the right amounts, and making other mistakes which were costly.

"I remember one farmer, who kept his own accounts, showing me that according to his books he owed us more than our books had charged him with. I also remember another man who said he was willing to take our statement as to what he owed us, because it always showed a less amount than his own books.

"We used to sell our apples and garden produce in the Dayton market, and on the way home my brother and I would count the money on the wagon seat between us to see how much we had made. Usually we didn't have as much as we thought we should have, but had no way to check it up and never knew whether we had lost some of it on the road or had made mistakes in making change.

"'Did you forget to charge it?' Oh, my; it is burned

right in on my brain. 'Did you forget to charge it? When you paid him so much money on account, did you fail to credit it? When you paid for something, did you fail to give him credit for his wages?' I can close my eyes and hear it all again."

John wanted to get off the farm and be a manufacturer. He had started out to be a manufacturer. "It seemed that nobody had anything for a college man to do. College men were only fitted for certain things—doctors of medicine, doctors of law, and doctors of theology. I didn't want any of these professions. I wanted to get into manufacturing, but I couldn't get anything to do."

One day, with Pat Hagan, he was out in the woods hauling logs for the sawmill. They sat down at midday to eat their lunch of bread and butter and cold mince pie. John did not mind the work, but it got on his nerves that he, with a college education, was not better off than an ordinary labourer. Once having reached a decision, he characteristically framed it into a resolution. He stood up solemnly and, addressing Pat, said:

"I have stayed here on this job too long. I am going to look for a job that is worth more than seventy-five cents a day. I can earn two dollars a day teaching school. This is the last day I will work on a farm."

This he always referred to as his "oath to Pat Hagan." But John's oath did not get him a job. In Dayton he was just a college dude. No one would hire him for office work because he knew nothing about an office. They would not hire him for manual labour because they said a college man was too stuck up to work with his hands. All the men in business were hopelessly prejudiced against college graduates, excepting as lawyers, doctors, or clergymen. John was out for a job. He heard that the toll

collector at the Dayton office of the canal was going to leave and he applied for the place. The superintendent of the canal would not endorse him—because he was a college man and would therefore not attend to business. One of the canal lessees, however, happened to have known Jefferson Patterson. He said to the superintendent:

"You are wrong. That boy will work. I knew his father. The boy has had to work hard all his life on a farm. No man could be a son of Jefferson Patterson and not know how to work. He is just the man for the place."

He received his appointment in 1868. The salary was eight hundred dollars a year, which was a fairly large salary for those days, but it was not what it seemed, for out of it the collector had to pay for his office, fuel, light, and stationery. The rent was two hundred dollars a year. The incidentals amounted to one hundred dollars a year, leaving a net income of five hundred dollars. This was for twenty-four hours' duty. John Patterson worked, slept, and ate in this room seven days a week all the year round excepting when the canal was frozen.

The traffic was not heavy but it was irregular. John might sit around all day doing nothing and have three boats between midnight and two o'clock in the morning. The tolls were paid according to the character of the goods shown on the bill of lading. Each collector decided for himself the proper classification of the goods and so every toll payment was an argument. If a bargeman had paid one sum at one toll house, he would not stand for being charged a higher toll by John Patterson. The collectors gave no receipts and they had no way of communicating quickly with one another, so an enterprising bargeman al-

ways asserted that the toll he was being charged was outrageously higher than the toll he had paid at the last office.

This bothered John for two reasons: First, it was against his conscience to charge any amount other than what the bill of lading showed to be right. Second, with the barge captains lying about the amount of tolls they paid, he had nothing but his own word to give to his employers that he was actually turning over the amount of money he had collected. John Patterson did not take honesty for granted. He took nothing for granted. He thought that any man might yield to temptation. Therefore he devised a system of receipts.

"I gave the captain of each canal boat a receipt for the money he paid for canal tolls. This receipt was a passport on to the next station or office, where he had the receipt I had given him copied.

"The owners of the canal had a check on me because the collector in the office below me had to send the receipts, which he took in, to headquarters. I also sent in all the receipts which I took in that were issued by the toll keepers beyond me.

"This system worked very well. I had no disputes with the captains of any of the boats and no arguments with the home office as to the amount of money which I had taken in."

Getting rid of the disputes with the collectors cut the time required to attend to his duties on the canal to almost nothing and also it gave him time to think over the sort of job that he had taken on. He reflected that the man before him had been a collector for many years and had retired at exactly the same salary with which he began. The salary was fixed and promotion was all but impossible; about the only place ahead was the superintendency

of the canal and that did not amount to much. He determined to start some sort of a business which would bring him in a little extra money and possibly lead on to something better. But unfortunately it had to be a business which he could attend to without leaving the canal office and which did not require capital or special knowledge. He reasoned:

"I pay my rent here; the office is mine to do with as I like provided I collect the tolls. I cannot go out for orders but I can take orders here from friends."

The only commodity which filled the bill was coal. He painted and hung out a sign: "Coal and Wood."

And that is how John Patterson, aged twenty-five, got into business.

CHAPTER III

IN THE BUSINESS KINDERGARTEN

THE organization behind the "Coal and Wood" sign on the Dayton canal office in 1868 consisted of John Patterson and a slate. When a friend came in with an order—and at first only friends gave orders—John wrote it down on the slate. Then he went out and bought the coal or coke or wood and hired a man to deliver it. On the slate he entered the total amount paid out by him, the amount he was to charge, and the profit. He had to pay cash for what he bought, so he did not have to bother keeping track of his indebtedness. When the customer paid the bill, the account was closed by wiping off the slate. And it may be said right here that to the end of his life that slate essentially represented Mr. Patterson's idea of good bookkeeping. He used often to say:

"Charge a profit—a reasonable profit, but always a profit on every sale. Then make your real money by volume of business."

He never had the patience to go into bookkeeping or accounting, and years later, when his affairs were so large as to need a big accounting department, he desperately struggled to find some way of keeping his affairs in mind without intricate financial statements. As long as he could, he kept his business affairs in slate fashion. When this became impossible, he had profit-per-register figures worked out—not in percentages but in dollars and cents

per register. The number of sales then meant a certain minimum amount of profit to the company—if everything went according to schedule. His whole effort was then to see that everything did go according to schedule. With the daily sales and the daily bank balance in mind he could estimate in his own way the condition of the business. No matter where he was, the daily sales record and the bank balance had to be wired to him, and if they did not look right he got home by the fastest means possible to locate the trouble.

The coal business picked up surprisingly, for John immediately got the reputation of delivering exactly when and what he promised. In a few months he took in his brother Steve, and they added "S. J. Patterson & Co." to the impersonal sign John had put up. On account of the canal job John thought it would not look quite right to have his own name displayed. Steve attended to the filling of the orders and saw to it that the teamster who did most of the delivering did not delay—which he was apt to do because he had to change his horse from a dray to a cart to take the coal and sometimes he thought that was a deal of trouble which might be put off until another day.

The brothers made a net profit of about twenty-five cents a ton on coal. In about a year they had found enough business to make it worth while becoming coal merchants. The owner of a coal yard next door to the canal office was willing to sell. John made a deal to buy him out for two hundred and fifty dollars.

"Where are you going to get the money?" asked Steve. The twenty-five cents a ton plus the ten dollars a week from the canal had not given the firm any undue surplus.

"Borrow it," answered John.

He went to Gebhart, Harman & Co., a firm of local bankers, and, on the strength of his interest in the farm, got the money. Then the brothers became proprietors of a tumble-down coal yard, whatever there was in the way of good will, a pair of scales, two carts, some coal, lime, cement, and wood, and two blind horses—which Mr. Patterson afterward appraised as being worth at a top price ten dollars each.

Out of that two hundred and fifty dollars grew the whole National Cash Register Company. Of course Mr. Patterson had not even heard of the cash register at the time. He had no plans beyond getting into business. But the two hundred and fifty dollars is directly connected with his later development, for it put him into business and gave him a chance to build up the personal capital and credit that later furnished him with enough money to buy his cash-register interest. Some years later he realized sixty-five hundred dollars on the sale of some property left to him by his father, but this sum he had to use to buy out the minority stockholders—it did not go into the coal business. The start of everything was the two hundred and fifty dollars. And in every way it is remarkable.

He did not start with a big idea and a small capital. He had no big idea. That did not come until much later, for John Patterson developed rather slowly. He started with the commonplace idea that perhaps he could make a tiny retail coal business pay. His working capital was what he could currently save out of the ten dollars a week paid by the canal company, and up to date he had not been able to save anything out of it. His fixed capital was exactly nothing, for he owed the full purchase price of the little coal yard.

Most men think it hard enough to have to start into business from scratch. John Patterson started several yards behind scratch. He did not know enough about business to understand that launching a new enterprise, not merely without working capital but with a fixed capital owed for on a short-time obligation, was not really taking a chance in business at all. Not one venture out of ten thousand that starts under these conditions gets by. A ten-thousand-to-one shot can hardly be described as a chance. Yet, to get ahead of the story a little, the fact stands forth that not only did John Patterson win out in the coal business in spite of the conditions of its start, but he also founded the N. C. R. and continued it for many years owing on short-time obligation for his capital assets. It was not until many years later, when the business was on a world-wide basis, that the debts were funded by a preferred stock issue. He never really distinguished between borrowing for bricks and mortar and borrowing in the cycle of manufacturing and selling. He thought that earnings put back into the business ought to pay for all capital improvements and extensions. It was his sound practice with respect to taking money out of the business that saved him from the disaster that would otherwise have surely come as a result of an essentially unsound confusion of fixed and working capital. From the very beginning he regarded a profit not at all as a personal perquisite but as something to put back into the business to make it bigger and better. He put back the profits with supreme confidence. He was always willing to go down with the ship. He never had anything laid by on the outside for himself. And he met financial crises head on.

Mr. Patterson knew all about financial crises—they

were his constant companions. In the beginning they used to visit him once a week. Then they came around only once a month; then only once a year. They did not quit calling for about thirty-five years. He shook hands with every one of them and then edged them off the premises. Sometimes they did not want to go but they always did go. They were always pushed out by a crowd of business. His unvarying rule when short of money or when outgo began to exceed income was to get more income from more sales. He believed that cutting down expenses to make ends meet was the surest possible way to prevent them from meeting. He held that cutting down expenses cut down initiative and energy. If his bank account became anæmic, he went right out after the fresh blood of new business. He doubled his volume in the depression following the Panic of 1893. John Patterson was always at his finest when in trouble. He fairly revelled in it.

With the coal yard bought, he at once began to show what sort of business stuff he had in him. Retail coal selling was on a strictly habit basis. There were a dozen or more coal dealers in Dayton and they all sold about the same sort of coal in the same way. Certain truths were held by them to be self-evident—among them was that coal was just coal, that it was a dirty business at the best, and therefore a coal yard was not a parlour, a coal cart was not in the class with any known vehicle, excepting perhaps a garbage wagon, and that the driver of a coal cart was normally covered with coal dust. No coal dealer in Dayton really had anything to offer that every other dealer did not have. It was a drifting sort of business.

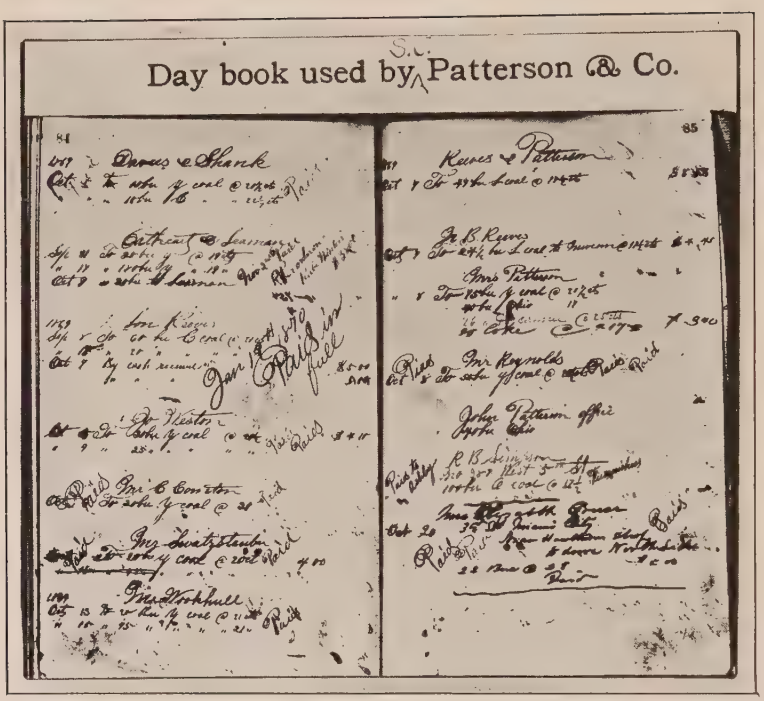
John Patterson could as easily as not have sat around his canal office taking tolls when a boat went by or taking

orders for coal when somebody dropped in yearning for coal. He would have been merely following precedent, and it was considered in those days highly dangerous for any one to follow anything but precedent. For some months John Patterson did follow precedent. He took orders and filled them. The amount of each sale and the profit on it went up on the slate. Then he began to ask himself why any one wanting coal should buy from him rather than from any of the other dealers in town. It was an elementary, fundamental approach to business. He could find no reason other than friendship. He did not consider friendship as a sound basis for business intercourse.

Therefore he proceeded to create some reasons why the public should deal with him. His reasons are as good today as when he created them. He made a specialized product out of an ordinary commodity. Then, when he had something special, he advertised it.

His first step was to get a good coal. He found that a Hocking Valley coal known as "Brooks" coal was generally considered by the people in exclusive Dayton to be the best coal. He got the Dayton agency for that coal and advertised it in the newspapers. He found that dirty coal was a frequent cause of complaint. He made it a rule that all the coal his company delivered must be clean. More than that, it must be all of the size ordered and contain absolutely no slack. If a carload of coal came in dirty, the teamsters had to screen it by hand on a gravel screen. Otto Nelson, who had been continuously in the employ of Mr. Patterson and later of the N. C. R. since 1881 and whose father was also employed by Mr. Patterson in the coal business, told me that Mr. Patterson shipped coal as though each lump were an Oregon apple.

WHERE MR. PATTERSON STARTED IN BUSINESS AS A CANAL COLLECTOR



THE YOUNG COAL MERCHANT'S SIMPLIFIED BOOKKEEPING

At first, when a friend came in with an order, John wrote it down on a slate. Then he went out and bought and paid for the coal or coke or wood and hired a man to deliver it. When the customer paid the bill, the account was closed by wiping off the slate. When he took his brother Steve into partnership, the combination was called "S. J. Patterson & Co." The slate was superseded by a "Day book," but to the end of his life John H. Patterson retained his simplified idea of bookkeeping.

He did everything to the coal but wrap it in tissue paper. He told me of one new teamster who, not knowing the clean-coal rule, delivered two tons of nut coal that had some slack mixed with it. Mr. Patterson heard of the delivery. He went at once to the purchaser and apologized for the condition of the coal. Then he sent a man with a screen to clean it. This man took out sixty pounds of slack. Mr. Patterson sent one hundred pounds of clean coal to replace it. He said that no one had a right to expect business unless he satisfied customers.

The mines soon learned not to send dirty coal to the Pattersons, for whenever a bad carload arrived the next train out to the mines had John Patterson as a passenger. It does not take any particular amount of imagination to figure out just about what Mr. Patterson had to say when he reached the mine or how he went about it. At any rate, according to Mr. Nelson, no dirty coal ever came through for a long time after one of Mr. Patterson's visits.

He found that coal buyers generally complained of short weight. He bought the best scales on the market. He had them tested every thirty days. After a cart-load of coal was balanced for weight he made it a rule to add an extra shovelful. Then he advertised that any customer could have the coal bought from him weighed on the public scales at the company's expense. Often when Mr. Patterson met one of his teams delivering coal he would order the teamster to drive to a public scale and have the weight checked. All this he advertised.

Later, when he began to make money, he discarded the two blind horses and bought the best horses he could find. These horses had to be well groomed and kept in condition. He fitted them out with gold- and silver-trimmed harness. He had the carts painted brown and put "Patterson

& Co." in big gold letters on their sides. Thus he began to differentiate his business from any other coal business. In a way he took himself out of competition with the others in business.

He worked unremittingly. One morning a boat man came through about four o'clock and found Mr. Patterson at work.

"What are you doing up at this time of the night?" asked the boat man.

"What time is it?"

"Four o'clock."

"I am making out my monthly coal bills," replied Mr. Patterson. "We must get in about nine hundred dollars to pay our freight bills or we shall be put off the railroad."

He was continually short of money, because he was doing a fair-sized business on no capital whatsoever. He followed the old slate procedure of marking up the profit on every transaction, and being short of ready cash did not bother him as long as he had before him a record of profit on the transactions. He of course had no bank credit, but he had personal credit, and when he had to have additional money he used that credit. He told the story of one of these borrowings to illustrate his favourite principle, that if one went to a man to say something the thing to do when he got there was to say what he had to say without any preliminary palaver. On this morning he needed five hundred dollars at once. He went into the office of George Phillips, and, as he entered, said:

"I want to borrow five hundred dollars until this Friday."

Mr. Phillips turned around to his clerk:

"Write out a check, George." Then he continued to Mr. Patterson: "Let me give you a little advice. If you

had not asked for it in the way you did—if you had said to me: 'Good morning, Mr. Phillips. How do you feel this morning and how is business?'—you would not have gotten the money. Always be brief. And another thing, be sure to pay back that money next Friday."

The money was paid on Friday.

The daily records showed profits on every transaction, but the firm did not have any money. There was a difference between what they ought to have and what they did have. Mr. Patterson could not account for the discrepancy. He got a clue while making his collection rounds. Most of the customers disputed the amount of coal that they were charged with. He had to make compromises in a number of cases. This worried him. It also occurred to him that if the customers were not sure about the amount of coal that they received probably the firm itself did not know how much coal it actually delivered. It was perfectly in reason to suppose that charges were forgotten or were made against the wrong customer. Thereupon, remembering his experience on the canal with the receipts, he devised a system of receipt tickets.

All of this seems simple enough to us now. We are familiar with receipting for most of the articles that are delivered to us. But it was an absolutely new idea at the time. Mr. Patterson had receipt tickets printed and sent one out with each load of coal certifying to the kind of coal, the weight, and the price. The purchaser had to sign the receipt at the time of delivery. Then when the bill was presented for payment, the receipts were always attached to show that the amount of the bill was correct. His brother protested about the expense of the receipts, but John Patterson persisted in their use and he used to

tell triumphantly of a collection he made from a man who in the previous year had protested the size of his account.

"I remembered the first time I went into the man's house to collect a bill and how he claimed that my account was wrong. He started to do the same thing again. He said:

"'I never got that much coal. There you have got me charged with eight tons of coal. I could not have used it.'

"I handed him the eight tickets. He said:

"'There is one. My wife signed that; it is all right. Here is one that I don't know anything about. I didn't sign it and we haven't anybody about our house named Mary O'Flannigan.'

"I answered: 'Isn't your servant named Mary?'

"'I don't know what her name is.'

"'There was nobody else at home and she signed it. I will ask the driver.'

"I asked the driver and he said that the servant had signed the ticket. He disputed another ton. I showed him the ticket; on the back of it was written in the driver's handwriting, 'No one at home.' It was signed by a neighbour and the driver had put his initial at the bottom. The customer then gave up:

"'I will take it all back. We got that coal and we burned it and here is your check. You could have had all the trade in Dayton if you had done this four years ago.'"

Having introduced the receipts, John insisted that they be used:

"We lost one load of coal because the driver failed to get the ticket signed. My brother wanted him to go back and get it signed. I said:

"'No, the man was at home and you forgot it and we will just let it go.'

"My brother never forgave me for losing that load of coal, but I wanted to set an example."

The receipt system increased both the volume of business and the profits. Then came the first big setback. The company which had been selling the Brooks coal to the Pattersons thought the increased sales were due solely to the excellence of the coal. They did not see why they should not supply all Dayton instead of being confined to one firm, and they set about cancelling the agency. John Patterson was on the spot at once.

"It is not your coal that is making the sales," he said to them. "It is the way we are selling it. If you take away this agency you will regret it only once—and that will be all your life."

The coal company could not see what had built up their business. They abrogated the agency contract and tried to put their coal in every yard in Dayton. John Patterson immediately secured another Hocking Valley coal which was about as good as the Brooks, added his service to it, and sold just as much of it as he had of the Brooks. The Brooks people saw their Dayton business drop right back again to where it had been before the Pattersons started to advertise.

The business could not help increasing. John was now giving his entire time to the coal business, having resigned his canal collectorship in 1876. Every customer got what he paid for and a little more. The smallest complaint was a personal affair for John Patterson and he settled each complaint to the absolute satisfaction of the customer—and regardless of expense. The "regardless of expense" feature annoyed his brother Steve; the two brothers were

so unlike in disposition that any long business association between them was impossible, and especially since Steve, being the elder, thought he ought to have the final say. He was against most of John's new ideas. So in 1879 they dissolved partnership, Steve buying out John's interest in the business. John then, with his youngest brother, Frank, organized a new firm. The firm became Patterson and Company. He had the wagons painted and the new firm name placed on them in large gold letters. He knew the advertising value of those clean, fresh-looking wagons that could be seen several blocks away. Just a few days after the repainting, people all over Dayton began to speak to him about the business he was doing. "We see your wagons everywhere," they would say. Mr. Patterson had already sensed the importance of an air of prosperity; one of his maxims was that before a man could be prosperous he had to look prosperous. The business grew; the one office developed into six, designated by the letters of the alphabet from "A" to "F." The brown of the coal carts and the gold lettering were carried out into the painting of the exteriors of the offices—the company had a colour scheme to distinguish it from all other companies. We see nothing remarkable in that to-day, but then it was an absolutely new idea.

The offices had to be clean. Mr. Patterson was about as neat a man as ever lived and everything about him had to be likewise. He thought that no man could do accurate work amidst disorder. No coal offices such as the Pattersons' had ever been seen; his delivery outfits ranked almost as equipages. The business men thought him extravagant, but they had to admit that he got the business. In a few years he had more than half the business of Dayton. His numerous offices made it easy to order

from him—which was why he had the offices. He knew that, in spite of his extra service and his good coal, people would not go to much trouble to order coal—he had to be right at hand to take the order. This was before telephones were in general use. John Patterson, however, had a telephone as early as 1878—the first one in Dayton. He never let anything new get by him.

All the coal for Dayton had to come from the mines by a roundabout route through some two hundred miles and over three railways. That made the freight expensive. A direct line to the Coalton and Wellston fields would be only one hundred and twenty miles long. Several citizens proposed that Dayton finance a narrow-gauge railroad over the direct route. John Patterson had no money to put into a railroad but he had a surplus of energy and he was among the most active of the promoters of the new railroad, which was finally organized as the Dayton and Southeastern Railroad. He advanced the argument that it was a community duty to make an investment which would save the community money. They raised the money and built the railroad. It is now a part of the Baltimore & Ohio system.

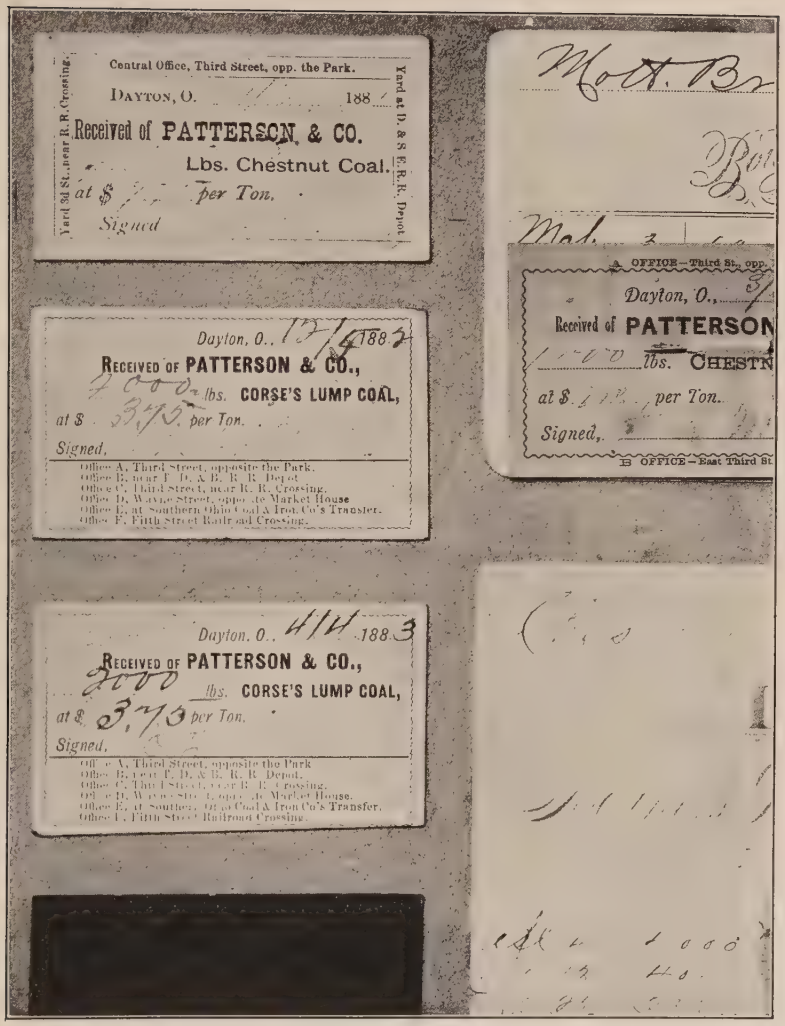
The business of the brothers became sufficiently large to warrant mining their own coal. They leased a mine at Coalton and later one at Wellston near by, and later opened a mine store. The little railroad did not have enough coal cars and had not the money to buy more. John Patterson borrowed fifteen thousand dollars in Dayton and had fifty-five coal cars built and saw that every one of them was duly labelled "Patterson & Co." in big letters. This was the largest investment he had ever made and it begins to show something of his capacity.

He also gave evidence of what later became a character-

istic. He found that the people of Dayton held that all coal miners were more beast than man. That would never do—he knew the miners. As a matter of education he thought it would be well for the people of Dayton to have a look at his miners and for the miners to have a look at the people of Dayton. Therefore he brought all the miners and their families up for a Sunday in Dayton. The railroad had only two passenger coaches so Mr. Patterson had the coal cars fitted up with seats. It was a great party—and not a bad advertisement.

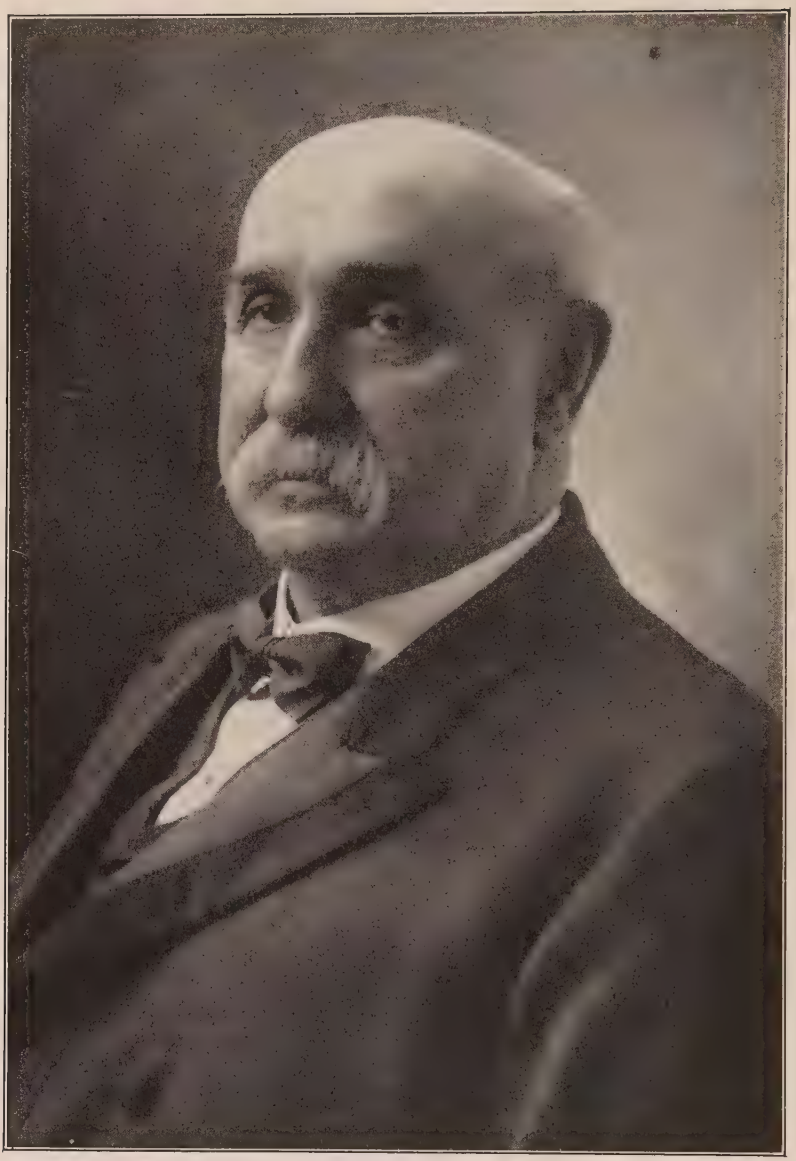
He was always searching for the quickest and most convenient way of doing everything. But the way had to be also the most thorough and most accurate. It was an affair of great pride with him that in all his years of service as a canal collector his only error had been one of four cents. He had to know sales and profits every day—which is not a bad idea for a small business that is extending rapidly and has no money to spare. He worked out a daily statement form which gave him everything that he wanted to know. Then he had the form printed, and making it up became a matter of daily routine.

He instituted a daily report showing the number of loads handled by each teamster and the time employed. From this he made up a weekly chart to measure the efficiency of the delivery service. If the efficiency dropped, he had to know why. One week the figures showed that several teamsters had worked overtime—but the deliveries were less than the average and there had been no long hauls. Mr. Patterson examined the drivers. One told him a horse had lost a shoe and he had to delay while he was being shod. Another teamster had made a mistake on the kind of coal ordered and had to return and unload it. Another had delivered a ton of coal C. O. D. and for-


Central Office, Third Street, opp. the Park.
Yard 3d St., near R. R. Crossing.
Yard at D. & S. E. R. R. Depot.
DAYTON, O. 188
Received of PATTERSON & CO.
Lbs. Chestnut Coal.
at $ per Ton.
Signed
Dayton, O., 188
RECEIVED OF PATTERSON & CO.,
lbs. CORSE'S LUMP COAL,
at $ per Ton.
Signed,
Office A, Third Street, opposite the Park.
Office B, near P. D. & B. R. R. Depot.
Office C, Third Street, near R. R. Crossing.
Office D, Wayne Street, opposite Market House
Office E, at Southern Ohio Coal & Iron Co's Transfer.
Office F, Fifth Street Railroad Crossing.
Dayton, O., 188
RECEIVED OF PATTERSON & CO.,
lbs. CORSE'S LUMP COAL,
at $ per Ton.
Signed,
Office A, Third Street, opposite the Park
Office B, near P. D. & B. R. R. Depot.
Office C, Third Street, near R. R. Crossing.
Office D, Wayne Street, opposite Market House.
Office E, at Southern, Ohio Coal & Iron Co's Transfer.
Office F, Fifth Street Railroad Crossing.
A OFFICE—Third St. opp.
Dayton, O.,
Received of PATTERSON
lbs. CHESTN
at $ per Ton.
Signed,
B OFFICE—East Third St.

A SYSTEM OF RECEIPTS DEVISED BY "J. H. P."

Most of the customers disputed the amount of coal that they were charged with. So he devised a system of ticket receipts. This seems simple enough now, but it was new at the time



JAMES RITTY

The inventor of the cash register. He conceived his idea through watching an indicator which tallied the revolutions of the propeller shaft in the engine room of a vessel on which he was sailing to Europe.

gotten to collect. He lost more than half an hour going back to collect.

A couple of days after this investigation Mr. Patterson had a new system of delivery tickets, to avoid the delivery errors. These tickets were in colours—a colour for each kind of coal. The driver had only to go to the bin bearing the colour and he was sure to get the right coal. This was important, for some of the drivers could not read.

The receipt tickets for the customers were also in colours. A white ticket indicated that the coal had been paid for, a red ticket was a charge, and a blue ticket was a C. O. D.

This was another characteristic principle—never to leave open the way to error if it could possibly be guarded.

John Patterson was already out of the business kindergarten and undertaking his own business education.

CHAPTER IV

GETTING THE BUSINESS UNDER WAY

THE Patterson brothers, operating three coal mines, a store, and a chain of retail coal yards, all without capital, had their hands rather more than full. That did not bother John Patterson—he was always marching well in advance of his capital. What did bother him was the limitations which the lack of capital imposed on him—he could not turn quickly enough in the mining end of the business to make current income act as capital.

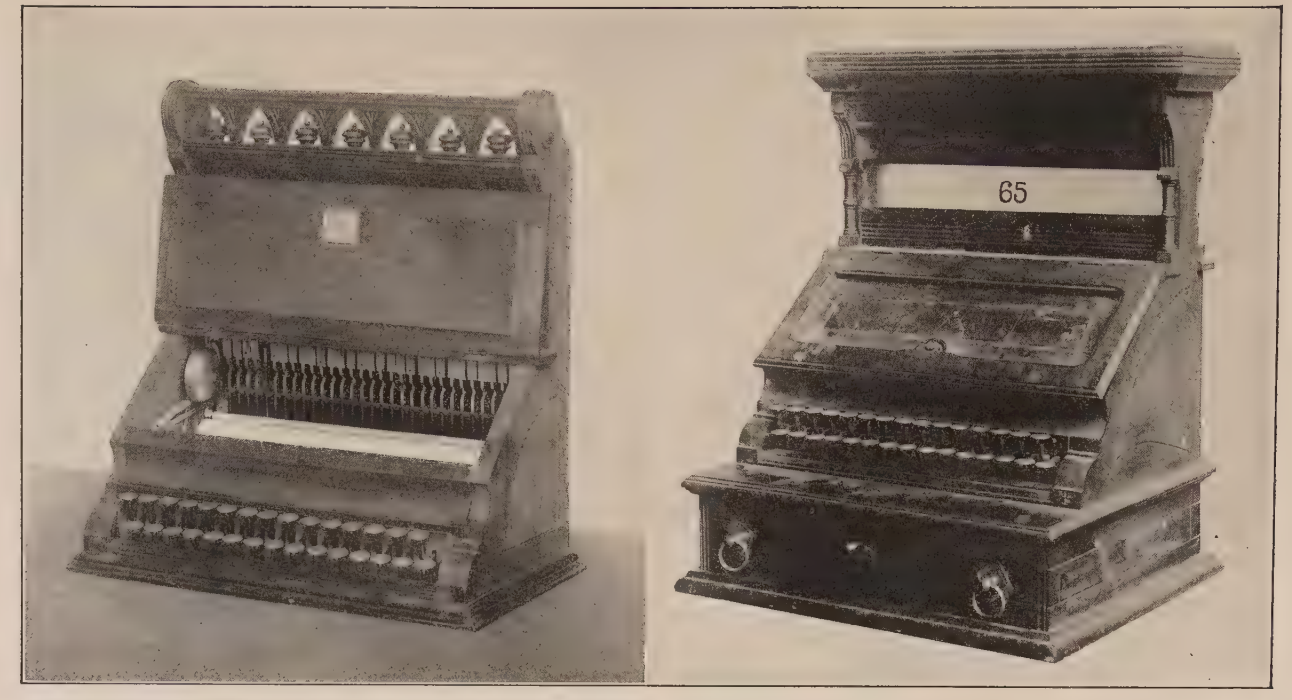
Helping to promote the little narrow-gauge railway had given him an insight into the methods of forming corporations—he had previously known nothing at all about them. The corporate form of organization was then not at all familiar to business; it had not been much used excepting for railroads and banks and they were mostly organized under special acts of the legislatures. Certain features of the form appealed to John Patterson's mind; he particularly liked the communal subscription of capital and sharing of profits without the cumbersomeness of the large partnership. He did not see why he should not head a company to mine coal—a company which could own mines and cars and be generally independent. He wanted to mine coal in a bigger way—he always wanted to do everything in the biggest way. And now he was beginning to get confidence in his own judgment, for the brothers had already established themselves as coal miners and distributors.

The opportunity to get into larger business soon came. The Pattersons were known as the most active coal men in the Jackson County region. They owned the Garfield and Sterling mines at Coalton and also a property known as the "Western" near by and had several leases of other properties on royalty arrangements. The daily capacity was four hundred tons and the rights were worth easily thirty-six thousand dollars. The country was then being covered with a network of narrow-gauge railways like the Dayton and Southeastern mentioned in the last chapter and for which John Patterson had worked hard to get the money. The new plan brought all the narrow-gauge units together under the name of the Toledo, Delphos and Burlington System. The odds and ends of little railways which went to make up the system are worth noting. The divisions were: The Toledo Division, from Toledo, Ohio, to Kokomo, Ind., 181 miles; St. Louis Division, from Kokomo, Ind., to East St. Louis, 268 miles; Dayton Division and Shanesville Branch from Delphos to Dayton, Ohio, 102 miles; Cincinnati Northern Division, from Cincinnati to Dayton, 55 miles; Dayton and Southeastern Division, from Dayton to the terminus of the Iron Railroad and branches, 185 miles; the Iron Railroad (and spurs), from Ironton, Ohio, to the Dayton and Southeastern connection, 23 miles; the Spring Grove, Avondale and Cincinnati Branch, through the suburbs of Cincinnati and the zoölogical gardens, 5 miles.

The financial dictator or promoter of the enterprise was George William Ballou of Boston and, although the bonds were sold in the neighbourhoods served by the roads, the control of the stock was with a group of Boston men. This is how John Patterson first got in touch with Boston financiers and is the reason why the principal financing of

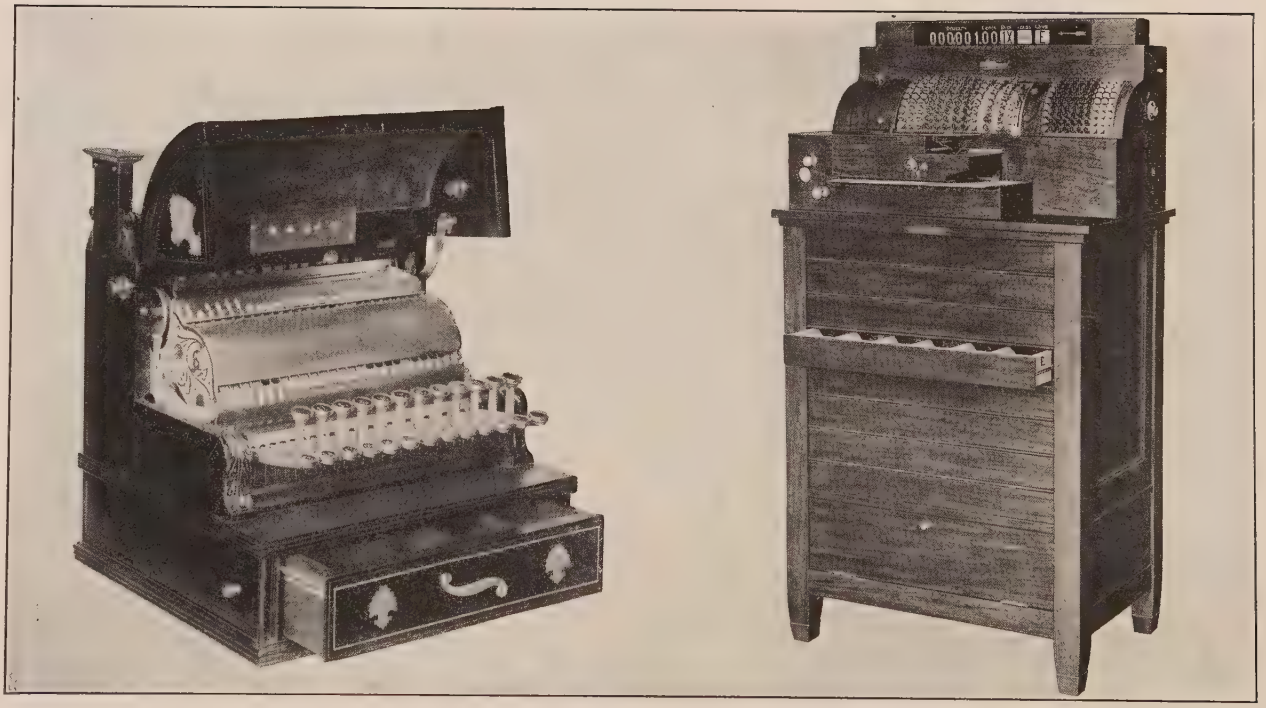
the National Cash Register Company was always done in Boston. The president of the railway system was General John M. Corse, one of Sherman's men and a well-known veteran of the Civil War. This was the period when it was considered good business to have a general at the head of every company appealing for the public's money. It will be remembered that General Grant was unfortunately induced to go into business, while the "Generals Disaster" of the West Shore Railroad will not easily be forgotten by many. The railway crowd wanted to get into coal mining. They picked on the Pattersons as the best managers and on March 8, 1881, General Corse executed an agreement with John H. and Frank Patterson by which the Pattersons were to buy coal lands on the line of the railway in the name of Corse. Then these lands were to be resold to a corporation to be formed and the Pattersons were to get one third of the profits of such sales. It was then considered entirely legitimate for the organizers of a company to acquire property personally and sell it to the company. That is the chief way in which money was made out of promotion; the plan is not entirely unknown to-day.

And now begins the period in John Patterson's life which he looked back on as the most disagreeable. As a result of his experiences, he made the rule never to engage in any enterprise which he did not control and never to buy a bond or a share of stock in an outside company; he even went so far as to refuse to carry life insurance. His ordeal was not unlike that of Henry Ford's who also, once he got free, would take no interest outside of his business and who also is always in control of whatever he undertakes. After it was all over and John Patterson had received his lesson, he would not consider other than single,



I—THE DEVELOPMENT OF THE CASH REGISTER

Left: The first practical cash register, made by James Ritty. Right: The first cash register turned out by the N. C. R. Co. Notice the added cash drawer



II—THE DEVELOPMENT OF THE CASH REGISTER

Left: The second type of register, with the detail adder, turned out by the N. C. R. Co.
Right: The cash register of to-day

undivided authority in the management of any enterprise. In his own he was the single authority. His advocacy of the City Manager plan grew out of the same devotion to centralized power. But that is getting ahead of the story. His initiation fee into high finance was three years of hard work and twenty-four thousand dollars in real money.

In the next couple of months the Pattersons bought 4,705 acres of land in Jackson County for which their backers put up $100,635.80 in cash and $76,770.25 in promissory notes. Then Messrs. Corse and Ballou proposed the organization of a mining company to be known as the Southern Ohio Coal and Iron Company with $1,500,000 in common stock and $400,000 in bonds. The Pattersons were to manage the property and Corse and Ballou were to do all the financing; of the bonds $110,000 went to the promoters for the coal lands that had been bought, $40,000 to the Pattersons for their mines and cars, while the remaining bonds were to pay off notes and mortgages and to open new mines and stores. General Corse as president of the railway said that he would extend its facilities to handle sixteen hundred tons a day. John Patterson said that he could sell that amount daily and figured that the company ought to turn a profit of $345,000 a year. With these rosy prospects they started business.

John Patterson treated the new company exactly as though he were its sole owner and he was everlastingly on the job. His characteristics began to develop. He planned each day in advance. At breakfast he made up his schedule of work, and every item of work on the schedule had to be done before he went to bed. He had breakfast about six in the morning—he lived with his

brothers Steve and Frank at his mother's home on Third Street. If he were going to the mines, Otto Nelson had to have a horse and buggy ready for him to make the 7:10 train—which was the only morning train on the railway. He went to bed whenever the work for the day was done—which was often well past midnight. He began to subordinate all else to his work. I am told that when he went to a party at night he would often fidget about for a while and then excuse himself on the ground that he had important work to do at his office. Later in life he rarely went to any social affair that did not have to do with his business, but in these days he went about a great deal and was in the way of being a leader in Dayton society. He burned the candle at both ends. This is probably why, years afterward, he discouraged executives from entering into any social activity that might keep them up late at night.

He went to bed whenever the day's work was done and not before—he required very little sleep and took as little as required—probably he did not average more than six hours. He ate whatever he liked and as much as he wanted—which was a good deal, for he had one hundred and seventy pounds of muscle and energy to sustain. He smoked to some extent but not a great deal, and also he was not a total abstainer. In short, he lived at this time about as did the average man, excepting that he put work first. He had practically no recreation and did not seem to want any. Outdoor games of all kinds did not interest him and he did not like cards or billiards.

He had no close friends or companions, but not because he did not like to be with people. He wanted to be with people in order to learn from them, but the moment they had nothing more in the way of information to give him

he wanted to be on his way. All his thinking had to be done in solitude—later when his affairs became large he worked out most of his important plans in the middle of the night in bed.

In the particular period of his life which we now are reviewing he had not yet learned that a plan is only a plan until it is put into operation and that it could not go into full operation without the help of convinced human beings. He thought that everyone ought to recognize a good plan as good, and he got into quite a little trouble by forgetting that to gain real coöperation he had to put his people through the same step-by-step mental processes that he had gone through to reach his conclusion. He had already gained a reputation for being self-willed, and very few of his fellow townspeople recognized that what appeared to be merely whims were always founded upon a process of reasoning—be the reasoning good or bad. It was impossible to shake his opinions by opposition—he regarded every sort of brute-force opposition as a challenge. But it was possible to show him that he was wrong and he would reverse himself in an instant. For John Patterson, curiously enough, never had any pride of opinion; he was for some idea not because it was his but because it was right; show him that the idea was wrong and he was for the new right just as energetically as he had been for the old right.

The mine store gave him a great deal of trouble. He could not understand what was the matter with it.

"We were doing a business of forty-eight thousand dollars per year, with almost no competition, and our prices were high. The surprising thing, however, was that at the end of each year we could see no improvement in our finances. In fact, we were running behind. We had

no bad debts and paid cash for all our goods. We found that our net profits should have been about twelve thousand dollars per year. But at the end of three years we not only had not declared a dividend but we had lost three thousand dollars and were in debt over sixteen thousand dollars. We tried to give our interest away to any one who would agree to pay the debts. We had no takers. And yet not a dollar was stolen. Where did the profits go? This was a problem no one seemed able to solve.

"I went on a tour of inspection. I soon found that certain miners waited to buy from certain clerks. This was the clue that led me on. Taking a miner's basket, I found him charged with only half the goods he actually received. I kicked three of the clerks into the street, and sent the superintendent of the store coatless after them. I realized that I had adopted a wrong plan in giving a reward to the clerk who sold the most goods. They were giving away goods in order to get personal following. We had had the most popular clerks in Coalton. The coal miners were loud in their praise of them."

Mr. Patterson was at his wits' end. He had to reorganize the store but he did not know how to ensure against the old evils unless he stayed there himself, and that he could not do. He wanted some sort of a check on the new clerks that he hired. He heard of a machine to register sales that was being made in Dayton. He wired for two of them without inquiring how much they cost. They came in the form of wooden cabinets equipped with keys that punched holes in a roll of paper. They were billed at fifty dollars each, which was surely high enough considering the small amount of mechanism. Everyone but John Patterson was for sending them back.

He said flatly that he did not care how much they cost if they would check the business and stop the losses.

"I employed a new superintendent of the store and explained the registers to him. A few days later I tested the system. The holes in the paper tallied with the cash drawer. In fact, they tallied too well. There was no allowance for human error. I put a spotter on the superintendent. The man had worked out a system for himself. He did not register all the sales, but at night counted the cash and credit sales and worked the register to balance with the amount. We fired the superintendent and sent for a long-haired bushman twenty miles back in the woods. We explained the registers to him and told him that that was the main thing we wanted him to look after. The result was that in six months we reduced our debt from sixteen thousand to three thousand dollars and our books showed a profit of over five thousand dollars. The registers did it all."

Which is how John Patterson met with the cash register. This was in May, 1882.

The registers worked so well at Coalton that Mr. Patterson bought a couple more to try out in the retail coal yards all of which did quite a little cash business, for those who could not afford to buy coal by the ton would buy fifty or twenty-five or even ten cents' worth and take it away in a wheelbarrow. In those days it was possible to get a discernible amount of coal for ten cents. The farmers would drive in on their way out to the country to buy a dollar's or two dollars' worth. The bookkeeping of the concern was done at Office "A"; each morning a clerk from the main office made the rounds of the branch offices to collect the money taken in the day before. The branch offices did not attempt to run

accounts; they just took in the money as it came and tossed it into a drawer. There was no check of any kind.

Mr. Patterson, and it is necessary always to bear this in mind, did not believe it was fair either to the employer or the employee to have an open, unchecked cash account with the employee. If he had not believed that with all his soul he would never have made the cash register his life work. But he put these two registers into the coal yards with some diffidence, for the employees there were of a different class from the men in the Coalton store. He made a little speech to them:

"Now, I don't want you boys to think that I am putting this register in because I think there is anything wrong. I have absolute confidence in everybody here. It will be a means of checking up the cash, preventing mistakes, and provide a method to balance up the cash at night."

The register did not have a cash drawer and the money taken in was registered and placed in a separate drawer. After using the register the first day, the collector came the next morning to take the cash, receipt tickets, and charges to the main office. He found the cash two dollars less than the registered amount.

"Well," said Mr. Patterson, "being something new probably they made a mistake and registered some sales more than once. Probably it is a good thing to make a mistake the first day. It will teach them to be careful right from the start."

The next morning the cash was again two dollars short.

"You must be more careful," warned Mr. Patterson. "The same mistake has been made for two successive days."

The third morning the cash was again two dollars short. Mr. Patterson began to get more interested.

"What is the trouble here? It is strange we are just exactly two dollars short every day. Let's try the machine."

He tried the two-dollar key and all the keys that would add up to two dollars. He made a number of registrations, and said:

"Everything works right. This shortage is due to carelessness or else somebody is taking the money."

The cash drawer was inspected to see if rats could get in and carry the money away.

Then Mr. Patterson said:

"Let's start systematically and find out exactly what is wrong. We will balance the cash with the register every two hours and find out what time the money disappears."

They balanced the cash every two hours with never a mistake. They closed the office for the night. The next morning the cash was two dollars short!

Mr. Patterson hired a policeman to watch the office that night. When the cash was counted the next morning, it was again two dollars short.

"Who was here last night?" asked Mr. Patterson.

"There was nobody here," replied the officer. "I sat where I could see the door all the time. I know nobody was in there."

"But," said Mr. Patterson, "this is mysterious. Two dollars has gone since the time we locked up the office. To-night make sure you don't lose sight of the office at any time. Don't let anybody unlock the office in the morning until I come."

The next morning when he came he called the officer,

went into the office, and opened the cash drawer himself. The money was two dollars short.

"Now, who was in here last night?" he asked.

"There was nobody here," answered the policeman, "except, of course, the night watchman."

"Night watchman!" exclaimed Mr. Patterson. "We haven't any night watchman."

"Why, he's been watching the office here for five years."

"We let him go two years ago. We figured that it cost us two dollars a night for a watchman and we decided that his services would not save us that much."

"He's been coming here every night," answered the dazed officer. "That's the reason I did not say anything about his being here last night. I supposed you knew it."

"When he comes to-night, arrest him," instructed Mr. Patterson.

The man came around that night as usual and the policeman arrested him. He confessed that he had been collecting what he deemed his pay for two years—ever since he had been discharged. Then Mr. Patterson ordered him released—he said it was his fault for letting temptation get into the man's way. But this register had caught a loss of twelve hundred dollars that the books could not show and saved a further levy of two dollars a day from the curiously methodical pilferer.

The cash registers which the Pattersons bought were rough affairs in the first stages of development, which had been made by the National Manufacturing Company of Dayton as assignees of a patent obtained by James Ritty. Ritty was a Dayton saloon keeper; on a voyage to Europe he went down into the engine room of the vessel and was much impressed by the indicator which tallied the

revolutions of the propeller shaft. He thought that something of the kind might be worked out to keep the records of cash sales in a store.

When he returned, he gave the idea to his brother, a machinist, and the two of them in 1879 worked out what they called a cash register. They applied for a patent which was subsequently adjudicated to be a basic one. The register was made in two styles, one with keys reading from one cent to twenty dollars and the other in multiples of five cents for use in bars. In the cabinet of the register was a wide roll of paper ruled in columns—a column for each key. When a key was pressed, it punched a hole in the corresponding column of the roll, rang a bell, and raised a tin indicator to show to the customer what amount had been registered.

When the day's business was over, the proprietor unlocked the cabinet, removed the roll, and counted the holes, multiplied each by the figure for the column, and then struck a total which would represent the amount of cash that ought to be on hand.

Several other registers had been invented before Ritty's but his basic feature was the mechanism which caused the indicator of the amount previously registered to drop when a new registration was made. None of the other registers had that essential feature.

Ritty made his first registers in a little shop on East First Street, Dayton, in 1879. He could not make it a success and in a little while sold out to J. H. Eckert for one thousand dollars. Eckert moved to the Rouser Building on Wyandotte Street, but he likewise had neither the capital nor the skill to promote so new a device, and in about a year he sold out to the National Manufacturing Company, which was composed of seven citizens

of Dayton with a paid-in capital of twelve thousand dollars. The organizers, who were also the directors, were William Kiefaber, Gus. W. Sander, Mary M. Eckert, Ben W. Early, William Sander, John Birch, and Charles Whealen. Gus Sander was president and J. E. Gimperling was in charge of the factory. They moved the factory to the Osceola Mill Building at 320 East Fifth Street. As a factory it did not amount to much. It had nine employees and only three or four pieces of machinery, including a lathe which was used by James Ritty when he built the first cash register. Edward Faulkner, who ran it, is still with the N. C. R. The lathe is in the company museum. Up to the time that the National Manufacturing Company was organized, about nineteen machines had been sold by Ritty and Eckert, of which the Pattersons had bought four.

In April, 1883, the company made an improvement on the register called the "detail adder." As I have noted, the only way to find the totals registered by the machine was to add up the holes punched in the paper. The new adding attachment did this adding automatically, although still in separate columns, by a series of adding wheels which showed in the case above the key the number of times that the key had been pressed. Instead of going over the big sheet of paper which was often a laborious job—for a busy day would produce a punched sheet twenty feet long—the owner now had only to take off the numbers registered, multiply them by the currency denominations they represented, and add them up to get the total registration. It was a cumbersome enough process but an infinite improvement on the paper roll.

The company needed more money to manufacture the

new design and decided to increase the capital stock to fifteen thousand dollars. The Pattersons bought all of the new issue—fifty shares in all—for twenty-five hundred dollars—John and Frank sharing alike. This was on May 8, 1883. John was behind the purchase; he thought that the cash register was a great idea. But the statement issued by the company early in 1884 showed a loss and Frank Patterson advised that the stock be sold for what it would bring. The brothers managed to get rid of all but twenty-two shares and were lucky enough to get just what they had paid.

Up to this time, about fifty registers in all had been sold. The company at the time of the increase in capitalization had moved to the second floor of the Callahan Power Building up Artz Alley. It had only one regular agent, Robert Callahan in Washington, and it had done no advertising. The only selling plan was to offer a commission to each owner of a register if he could induce a sale. Any one could be an agent and get a commission if he made a sale.

The coal business was not going well. The promoters seem to have fallen down on their contracts. They did not sell the bonds; John Patterson had to sell many of them himself. Before the enterprise was a year old (on March 20, 1882) he wrote to George W. Ballou:

I have sold 40 bonds at 85, upon the condition that all stock sold up to $20,000 should be donated to the Coal & Iron Company. This was the only condition upon which the parties would take the bonds or stock. The stock thus far sold has netted $15,000 which was turned over to the Coal & Iron Company. We have paid $24,000 on liens on the property General Corse bought. We borrowed $10,000 on my individual note, secured by twenty bonds. I am ready to put up the balance of stock in trust just as soon as the debts

are paid, or provided for, that is, the note General Corse gave and the construction debt. We have left about $1,100,000 stock, part of which, say about $100,000, is promised, leaving about $1,000,000 for the pool.

We expect to place about $100,000 bonds yet unsold and trust to be able to save $900,000 for the pool. We have had a hard time of it to pull through and if we could place about 90 more bonds, we would be in good shape. We have not yet settled the note at Boston House for $6,000 and desire you to take that amount of bond. There are seven left there which Darling promised to sell. I have had a big load to carry, Mr. Ballou, and I trust you will have Darling take the bonds on a subscription and that you will take twenty of these bonds on your account. This would relieve us greatly. Please answer. Had the Darling subscription of $275,000 not dwindled down to $156,000 I would have pulled through without any assistance. I have made my expenditures on his assurances and now I have to shoulder the whole load alone. I have faith in the outcome and endorse the Company's papers, but the sale of 25 or 30 bonds would lessen my burden greatly. Please answer.

John Patterson had agreed to sell sixteen hundred tons a day and General Corse had agreed to equip the railway to handle that tonnage. Patterson sold the coal but Corse never got the tonnage above three hundred a day and could not steadily maintain even that amount. The Pattersons had made contracts to deliver large quantities of coal and, the railway failing them, they had to make many deliveries by buying from other operators and at a loss running as high as sixty-five cents a ton. They lost thousands of dollars making good their deliveries.

Things went from bad to worse; John Patterson had not the control and he did not want to buy it—even if he could have raised the money. He and Frank talked it over and decided to get out. In March, 1884, they sold their interests in the Southern Coal and Iron Company to

a man named McNab of Gloversville, New York, and in April they sold their retail coal business to L. Caten—McNab's partner—and also their private mining interests, receiving $7,750 for the coal business and $16,000 for the mines. Both prices were away below the values. They did not consult their Boston friends. They just got out. The story of the adventure appears in an interchange of letters between Frank N. Morse of Boston and John Patterson.

Boston, Apr. 11, 1884.

DEAR PATTERSON:

I was surprised to receive your letter of a few days since announcing your retirement from the management of the Coal Company.

Since your letter came to hand I have been shown letters from a private source, containing alleged information quite contrary to the many favourable statements you have made about the property, its earnings, future prospects, etc.

I am very sorry to see this—not only because I am a holder of the Company's bonds—(bought on the strength of your personal letters to me)—but because some of the people here whom you might consider among your best friends in this section, and friendly to the enterprise, look upon your numerous statements and private letters as calculated to deceive.

The information I refer to goes on to say that the Company is not in a favourable condition financially, and that the last interest on the bonds was paid by money which you borrowed on your own personal securities—also that the Company has never really earned this interest.

This informant further insinuates that the management of the Company has never been what it was credited—evidenced partly from the fact that other properties only one tenth as large—with inferior facilities—earned nearly if not quite as much money as your Company—that since Jan. 1 the earnings were barely sufficient to cover operating expenses and the coming July interest would undoubtedly be passed.

I am also told that you sold your bonds—or a part of them, say 10—in this city at 48 flat while at the same time you represented to me you would not think of selling your bonds, and that the ones you offered did not belong to you but to a party who was obliged to sell as they were held as collateral by a bank, etc.

I merely write to tell you that I hear the above stated rumors, and many more—not that I believe—from what you have written me personally—that they can be credited, but were invented for some untold motive—either to break down the property or to injure your reputation; I should like very much to know the inside or true facts of your going out of the property entirely, not only for my own information, but to satisfy several prominent holders of the securities here who have similar information which they are not disinclined to credit.

Your early reply will very much oblige

Very truly yours,
(signed) Frank N. Morse.

To
Jno. H. Patterson, Esq.,
Dayton, Ohio.

To this Patterson, writing from the office of A. A. Thomas of Dayton, his college friend as well as his lawyer, replied with some heat:

Dayton, O., April 18, 1884.

Dear Sir:

Your letter of 11th at hand. I cannot and will not attempt the impossible feat of answering or attempting to explain insinuations—"from a private source containing alleged information" contrary to my former statements to you.

I have sold all my bonds and stock and am out of the S. O. C. & I. altogether. I expect hereafter to have nothing to do with it. The parties to whom I sold think they can do better with it than I did. I think they can. I hope they will. I have never said anything about it that I did not believe. I believe I have never made any representations of facts about it that were not substantially true. I have been woefully deceived in what I thought I could quickly accomplish and

still more so in the promises and contracts upon which I was induced to go into the enterprise. I have done the best I could, and worked to the very limit of my strength. I have sold some of the securities to my brother, to my immediate friends here, at the same price or higher than I sold them for in the east.

Let me go back a little in the matter. By Mr. Ballou and Gen. Corse I was promised all the money necessary for the enterprise, which they after talking with me sketched out, and I was to do the work. I did my part and nine tenths of theirs. The most of my time which was greatly needed for my part of the work was for two years taken up with trying to raise the funds which they had promised. After I had pledged by mortgaging my entire property, both personal and real estate, on the success of the scheme, Mr. Ballou in the face of a written contract refused to act on any idea but that he had an option to stand by me if I succeeded, or to abandon me if it appeared that I could not. Gen. Corse let go the railroad, and during the administrations of T. A. Phillips and E. E. Dwight, I had constant and ruinous hostility from them and their officers. T. A. Phillips always claimed that he acted under orders of R. M. Pomeroy. The property was started on a large scale, and the positive promise of sufficient and efficient railway service. I suppose this railroad service of this property, and by that I mean the Narrow Gauge R. R. from Jackson County to every place it ran, has been the most miserable and inefficient ever known by business men in the west. It would break up, and will yet, any business wholly dependent upon it as ours was for a long time. It broke itself up, and its bonds to-day are selling at about the value of the old iron in its track. The consequence to us was that we lost our business several times which cost us money to get over and over again. When we could make money largely and quick, we could not get the service done. T. A. Phillips sidetracked our own cars, and reduced the mileage price upon them one half, and then would distribute them to all the other mines not ours. He bought our coal for railroad use and neglected to pay us and held on to our rebates till he owed us $19,000 when we abandoned the contract. The Delphos Trust held $40,000 of our bonds, and its owners and directors never lifted one finger to help us in any way, but their influence for one year after they had received their bonds was against us. Now as to profits and payments of interest, all I have to

say is, we paid it, and we made the money to pay it with. It was known to all who had a right to know and inquire that a business of the extent of this, that is with a sale of from 40 to 50 cars per day, could not be done without a capital to carry it which was never provided for or given me. I believe when I sold, and at any time previous, the Company could pay its debts including interest, and owe not a dollar but the principal of the bonds. I did on January 1st last, in order to keep necessary money in the business, borrow some money to pay part of the interest due on coupons by giving my individual security, but there was cash coming in to pay it, which has already been done.

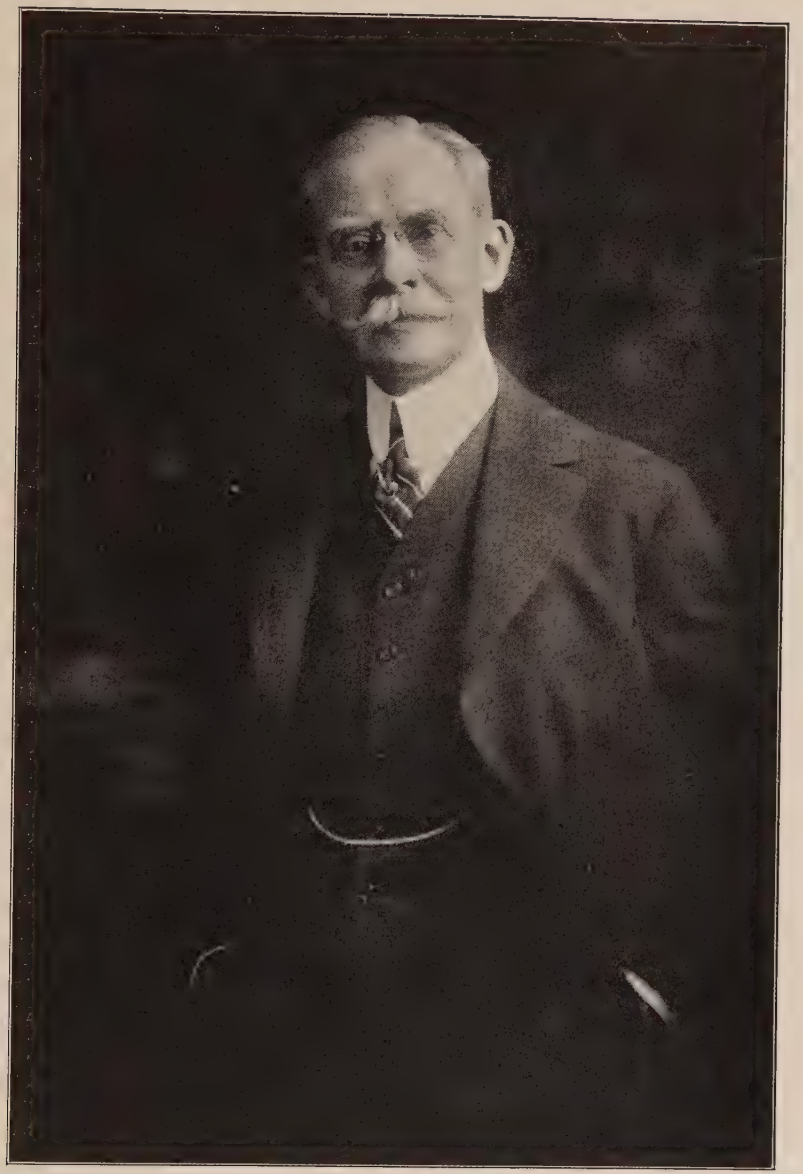
Now a word as to the property itself and the security of the bonds. The titles of the Co.'s lands are all good and as represented. Such land so located is scarce and valuable. It is rapidly getting scarcer. Some of the mineral and coal developed better than we expected, some of it not so good as we hoped. As a whole, I believe our experience with it fully sustained our expectations. I see no reason why it cannot with proper railroad treatment and service be made profitable, nor why any bondholders should sacrifice their holdings.

Now, a word as to other smaller properties making as much money. The answer to that is, it is not true, and if it were it proves nothing, for our property was put together for permanence and continuing and future value rather than for immediate profit. It don't take remarkable insight to know that you can take ten acres of coal land and open two small mines on it or three, and for a year or two make more money on the investment than we did on our plan or could. But it would soon be gone and over.

Now a word as to my profit in the business. For all my labour I never made any; I put in more than I took out; I made no money off any man by selling him bonds or stock.

Now as to my selling out. Parties largely interested in the Co. were dissatisfied with what I accomplished. I was. They wanted to take control and buy me out, and I sold at a price practically fixed by them for this purpose. You may show this letter to whom you see fit, but I respectfully request that you will never again ask me to answer what you call "the alleged information and insinuations" of anonymous parties.

(signed) JOHN H. PATTERSON.



"WELL, INDEED!"

"The two words were danger signals—they were the precursors of a storm. Those who knew Mr. Patterson well always looked around for cover when he spoke those words."

IN MONTANA IN 1884

When he made a six-months' trip with his brother Frank, after selling the coal business, with the intention of going into either the stock-raising or fruit-raising business. John H. Patterson is on the extreme right; his brother is on the extreme left

To this Morse replied:

Boston, April 26, 1884.

DEAR PATTERSON:

Your favors are received. I never fully understood the position of the So. O. C. & I. Co., although of course I was somewhat familiar with its organization, etc. The first intimation of any change in the management was from your letter and a letter written by Mr. L. Caten of Gloversville, N. Y.

Mr. Caten and Mr. McNab I find are taking a very peculiar position. The former has written a letter to a party here in which he makes all sorts of statements, not particularly favorable to the Co.; at the same time Mr. McNab (they are partners, I think) is buying up stock around $2.50 per share and has recently bought bonds. This I can't understand, his actions being at variance with his statements. Can you explain it? He gives the impression that the Co. has never earned its interest and that in all probability the July interest will be passed.

We naturally have a great many inquiries about the enterprise, but I don't think it will be best to show your letter to anybody, for reason that I always think a verbal explanation more safe and satisfactory.

I would like you to see the letter I refer to—I can get a copy I think and will let you see it when you are here.

What are you going into now? Let me hear from you if anything new turns up—and I will keep you posted at this end. Thanks for the check; it is entirely satisfactory.

I am, yours truly,

(Signed) FRANK H. MORSE.

To
JNO. H. PATTERSON, ESQ.,
Dayton, O.

"What are you going into now?" That was the question which John Patterson was also asking himself. With all his debts paid, he had $16,000. This was what remained of an investment of $40,000 and three years' work. And he had no answer to "What are you going into now?"

CHAPTER V

BREAKING OUT OF BUSINESS AND BREAKING IN AGAIN

JOHN H. PATTERSON was forty years old. He had sixteen thousand dollars in cash and a sort of a business training which he had worked out in his own way and which was quite unlike any one else's training —so unlike that it was generally denied that he had any training. He was thought merely to have notions. The only thing he knew anything about was coal, and the coal business was the only one in the world that he would not even consider going into again. He had not married. He was foot loose and fancy free. And one is not supposed to be that way at forty.

The kind of business knowledge he had accumulated was entirely peculiar to himself, but although he did not know it and no one else knew it, it was exactly the sort of knowledge that was most needful in the work that he was later to undertake. His principles were forming out of his experience. Of course in later years he added much to the volume of his experience, but every primary principle on which he later built success may be traced back to something that happened to him on the farm, in the canal collector's office, or in the coal business. He had made a success of retail coal selling by pulling himself out of the ordinary run of coal merchants—by doing things they never thought of doing, such as providing turnouts which delivered coal as though it were jewellery. He had already fixed in his mind the principles which he

expressed: "To accomplish an unusual end do the unusual thing."

The wholesale coal business; the management of a mining and selling corporation, was a failure, not because he did not do his part but because he had to depend on others, especially for financing. He did not have control. He never forgot that lesson, as I noted in the last chapter. He advised all of his people never to go into any business which they could not control. This is not at all a principle of universal application and it would be quite impossible for every man absolutely to control whatever he is engaged in. Mr. Patterson knew that, but he thought a man ought either to work for himself or work for someone else. He thought it improper for a man to have the title of boss without being the real boss. This was his interpretation of the impossibility of serving two masters. What he was really opposed to was absentee ownership of the kind that he had been up against. And he was sincerely afraid of erecting any power in his own business which would challenge his own. That seems to be a feeling universal with the founders of enterprises. It is true with Ford; it was true with the late John Wanamaker, J. P. Morgan Marshall Field, P. D. Armour, E. H. Harriman, J. J. Hill—with all the pioneers.

Mr. Patterson carried his thought so far that he did not want any associate to approach a position of equal authority. As he expressed it very well to Jake Oswald:

"When we get to the point where all depends on one man, let's fire him."

And that is exactly what he did, and that is one reason why the alumni of the National Cash Register Company have so generally made good, for he hardly ever took the

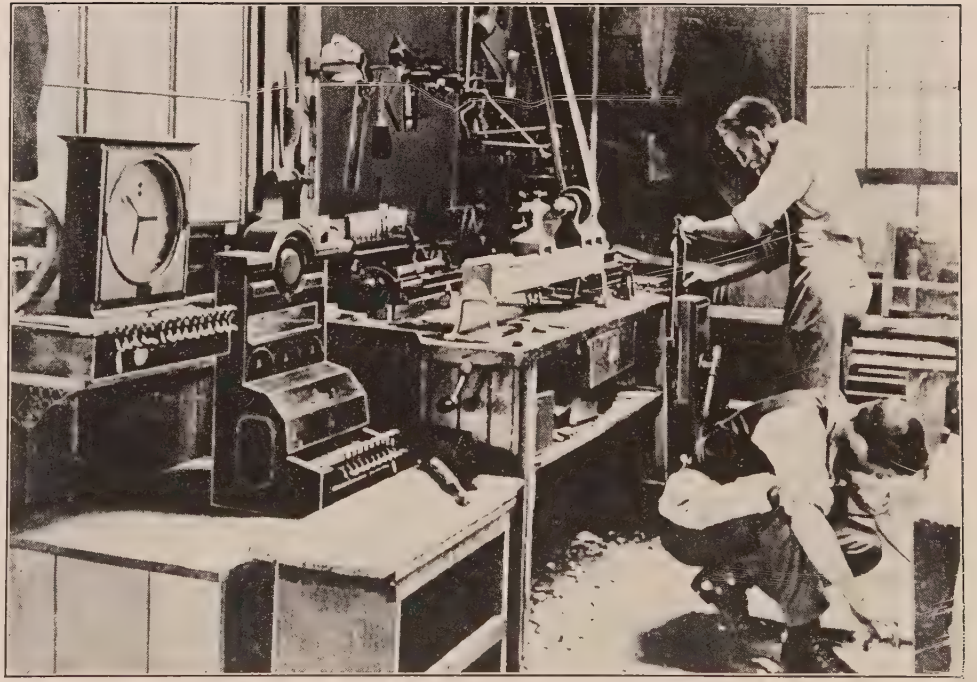
trouble to fire a man who had not sufficient mental force and ability to work himself into a position of central authority. That is the reason he fired Henry Theobald, the president of the Toledo Scale Company; Jacob Oswald, president of the Roto-Speed Company; Colonel E. A. Deeds, Hugh Chalmers; Thomas J. Watson, president of the Computing-Tabulating-Recording Company; and so on through a long list. It will be noted that every one of these men—fired for getting too powerful—to a most unusual degree controlled the companies which they afterward founded or headed!

Most of Mr. Patterson's firings were both sudden and cruel and they produced bad feeling—although nearly all of that feeling has since died away. But the extraordinary fact is that I have never met a man who worked with Mr. Patterson who, no matter what were the circumstances of his leaving did not copy most of Mr. Patterson's methods of doing business, and they have worked as well with these men as they worked for Mr. Patterson.

The idea behind having no indispensable individuals was not wholly personal. He fired many men for personal reasons and reasons sometimes of an extraordinary character. I say "fire" because the word "discharge" does not call up a picture of the operation. It is almost as beside the point as to say that the men resigned—which, as a matter of fact, many of them technically did. The firing of a man because he was too valuable was part of Mr. Patterson's plan, gradually worked out through the years, of trying to make an institution rather than a collection of individuals. He wanted the framework of the institution to be ideas and to have men to carry out the ideas. This is very different from having an institution

THE CRADLE OF THE CASH REGISTER INDUSTRY

The manufacture of cash registers began in 1879 in the marked space in this building



THE FIRST CASH REGISTER FACTORY

Before John H. Patterson bought George Phillips's controlling interest in the National Manufacturing Co. for $6,500. Two employees at that time comprised the manufacturing force that turned out cash registers

built of men. What actually came about, however, was not an institution merely of ideas, for that is impossible. Ideas do not function regardless of the personality of their administration. What came about was an institution so full of good ideas that men developed so rapidly that there was always a man ready to take the place of whoever went out.

Mr. Patterson did not know a capable man when he saw him. He was quickly attracted to men and sometimes thought them extraordinarily capable on very slight evidence, but he was equally quick to find out his errors. He was always shuffling the human cards. If the best man were shuffled to the top, he stayed there. There is a good deal of talk about some men being sure judges of human nature and unerring in their selection of assistants. I have met men who thought they had this faculty, but I have yet to find one who really had it. Men rise by a process of elimination. Mr. Patterson had a way of hastening the process, for, although he seemed to have great confidence in his ability to pick men, he actually had very little and was continually testing his judgment. He used to say that you did not have to take the whole shell off an egg to find that it was rotten, and so one piece of complete stupidity was enough to make him fire any man. He would fire a man for not obeying orders and he would fire him for obeying them too literally.

The whole policy was to keep the men on their toes and to check the least signs of bumptiousness. One of the higher officers of the company, now dead, was to Mr. Patterson's mind becoming both lazy and important. In a meeting this officer had made an answer which did not show any great comprehension of what was going on,

and what was worse, not much desire to find out Mr. Patterson was nettled.

"Well, indeed," he began. The two words "well, indeed" were danger signals—they were precursors of a storm. Those who knew Mr. Patterson well always looked around for cover when he spoke those words. "Do you know," he continued, "there are only two things the matter with you."

"If that's all," answered the officer cheerily, "I ought to be able to correct them."

"Well, I don't know. It will be pretty hard."

"What's the matter with me?"

"There are just two things. Everything you do is wrong. Everything you say is wrong."

It was a hard school that Mr. Patterson ran but it was no harder than the school he had been brought up in himself, and he never asked of any man nearly as much as he asked of himself. But the big thing is that he never failed to give ability a chance. After he had given the chance he might discover that the ability was not of the kind that he most needed, but, of the many thousands of men who have been with the N. C. R. for two years or more and who are now out in the business world, a negligible percentage are failures. The record of success among N. C. R. graduates is infinitely higher than can be found among the graduates of any collegiate institution. Fully 95 per cent. of the men who have gone through have made good. A high collegiate average is 30 per cent.

The reasons behind Mr. Patterson's rule are to be found in his early history. Even his most extraordinary actions go back to a lesson hammered out in the forge of experience.

Just as he was leaving the coal business he became in-

terested in the study of the business cycle. In the early eighties probably not one man in a thousand had ever heard of the business cycle and if he had he probably thought it had something to do with bicycles. Mr. Patterson, along about the year 1880, came across a little book that had been written by one Samuel Benner who called himself "an Ohio farmer." Benner brought out his book privately in the year 1875, as a result of the Panic of 1873, under the title "Benner's Prophecies of Future Ups and Downs in Prices" with the subtitles: "What years to make money on pig iron, hogs, corn, and provisions." The book was later taken over by the Robert Clarke Company of Cincinnati and went through fifteen editions, the last being in 1905. Mr. Benner sensed that there was something in the nature of a price cycle and on that basis established himself as a prophet—a kind of quasi-scientific fortune teller.

He based his prophecies on the price of pig-iron and he called his rule the "Cast-Iron Rule." He found that the cycles of panics were in the same scale with the cycles of pig-iron prices. Beginning with the Panic of 1819, he found it was eighteen years to that of 1837, twenty years to that of 1857, and sixteen years to that of 1873. "It takes panics fifty-four years in their order to make a revolution or to return in the same order; the present cycle consisting of eighteen years will end in 1891 when the next panic will burst upon us with all its trail of woes."

When Mr. Patterson came across this book he immediately added it to his Bible as a constant companion and it is impossible to estimate how much it really did for his business. He did not of course implicitly follow the author or make his plans according to rigid charts. What he got out of the book was, first, that something in the

nature of a business cycle existed, and second, that one should be ever wary of the depression which follows prosperity. He carried forward the author's chart as a general guide and then he watched the pig-iron market. He read the pig-iron quotations every day of his life and he had them tabulated. If pig-iron began to go down, he made preparations for bad business. If it began to go up, he got ready for good business. Whenever he found that the junk men were eagerly buying scrap iron, he made ready for an advance in business.

The book was not his guide, as I have said, but it awakened him to the changes in business, and therefore not once in his business life was he ever caught unprepared in an emergency. Whenever business was booming and the sales people were congratulating themselves on how good they were, he had a habit of drawing a wiggly line which by convention was known to be a snake and then lettering under it: "When the sun shines, look out for the adder."

He was ready for every panic before it started and he met each one in exactly the same fashion. He would always hold a meeting long before any one else thought that a panic was conceivable. He would explain that there was going to be a panic. He would make a big "V" on the blackboard or pad and say something like this:

"Here we have a valley of depression. Business is going to drop right down to the bottom and then come up the other side. We can drop with business or we can build a bridge and go across. Let's build a bridge."

His way of building a bridge was to intensify every sales effort. He did not draw in for a panic. He put on extra effort, and each panic marked a substantial advance by

the N. C. R. The company really grew up in the Panic of 1893.

Mr. Patterson's study of the business cycle may not have been scientific, although probably it was about as scientific as any other study excepting that he omitted the jargon, but he most certainly used his knowledge in the most intense and constructive fashion. For while many get out of this sort of study only a reason for hiding in the cellar and being chary of coming out of it, Mr. Patterson took an approaching panic as an instruction to revise his business methods and to press business the more furiously. He not only had, as all his associates said, "a nose for panics" but he also had an antidote for them.

John H. Patterson, aged forty, had the beginnings of business wisdom in him, but he did not know it and no one else did, for he just had a little money and nothing to do. He and his brother set out to find something to do.

They thought that perhaps farming offered more than manufacturing, although it is hard to believe that John ever really intended to go into farming. He wanted to be a manufacturer, but he was willing to look into farming. He was as unsettled as a schoolboy. The brothers left Dayton to buy a ranch and go into cattle raising or fruit growing. During the following six months, they visited every state in the West, from Missouri to California. Finally, they found three suitable ranches and took a six-month option on each of them.

Late in October they stopped at Colorado Springs to decide which of the three ranches they would buy. One evening they fell into conversation with a merchant from the East, who informed them that he was on a long vacation. John Patterson, always anxious to learn, wanted

to know how any merchant could afford to take the chance of leaving his business for that length of time. The merchant told Mr. Patterson that he had a good manager and also he owned machines, made in Dayton, which counted the cash receipts. Each day there was mailed to him a statement with the punched paper roll from the cash register. This, he said, gave him a perfect check on his business, and he had no reason to worry. The following morning the merchant showed a report to Mr. Patterson.

That night John Patterson said to his brother.

"Frank, this man's experience with cash registers is just the same as ours. What was good for the little store at Coalton is good for every store in the world. It is only necessary to convince merchants of the good that the machines will do and they will be used in every store on earth. The cash-register business can be made one of the largest industries in America."

The next day they left for Dayton with the intention of buying a controlling interest in the National Manufacturing Company.

The very day they arrived home the Pattersons arranged an appointment for the evening with George Phillips, the president of the National Manufacturing Company and who owned the controlling interest. John Patterson agreed to buy his stock for sixty-five hundred dollars. He and his brother Frank then went to their club. They told what they had done. The members took it as a great joke. They agreed that Phillips must have looked on them as angels sent from above, for no one else would buy the worthless stock of a failing company. One man said:

"You must have lost all your business judgment—

your six months in the West must have taken all the sense you ever had."

Talk of that sort always worried John Patterson. He was not easily influenced, but he was easily worried. He decided that he had done the wrong thing. He decided that he would go back in the morning and cancel the agreement. This is his own story of what happened:

"I went back to Mr. Phillips the next day and said:

"'I will give you a hundred dollars, and we will consider our contract of last night annulled. I would take the cash-register business off your hands, but since you say it is such a good thing for you and you like it so well, and you have such a great future in it, I thought I would not deprive you of it.'

"My offer was refused. Then I offered him five hundred dollars, and said:

"'This is just as good to you as it was last night.'

"Right then I vowed that I would never enter into any more contracts after dark. He said he would not take it, and I offered him two thousand dollars, but without result.

"He said to me: 'You have bought this stock. If you had paid for it and I had turned it over to you, then if you were to hand it back to me and say, "George, I will make you a present of this stock," I would not take it.'

"Then I told him:

"'I am going into this business and I am going into it right. I am going to make this thing go, and you will be sorry later on.'"

On Saturday, November 22, 1884, John Patterson took over the management of the company. The whole factory and office were in a room forty feet by eighty, and thirteen people in all were on the payroll. Henry Theo-

bald, who years afterward became general manager and who is now president of the Toledo Scale Company, thus describes what the place looked like. He told me:

"Immediately after the present management took hold of this business, they advertised for a shorthand writer and typewriter operator. Having taken a course in shorthand writing, I thought I would make application. So I sat down to a typewriter and wrote my application for the position. I have since seen the letter I wrote and have often wondered how in the world I ever got the job. At any rate, I got it. I was invited to call at the office of the then 'National Manufacturing Company.'

"I was shown to a little room about eight by ten partitioned off the main floor. The bookkeeper's desk occupied about one third of the room and the president's desk another third, and a few chairs the remaining third. I wondered where they were going to put me, but the bookkeeper, who was a good-hearted, genial old fellow, moved a few chairs and said:

"'Well, we will put the spittoon over there, I will stand here, and you can sit there, so the spittoon will be in range of both of us.'

"The whole establishment was then all in one room. On a shelf in one corner of the room were six or eight wooden cabinets. At that time we did not order many cabinets at a time, for we did not know how soon what little bottom the business had might fall out of it."

John Patterson was at last a manufacturer—with absolutely no knowledge of manufacturing. He was the proprietor of a business that had been definitely labelled a failure. The first thing he did was to change the name of the company to "The National Cash Register Company."

THE SIXTEENTH TIME
Good Luck Knocks at Every Man's Door
But he is generally out visiting a Neighbor when the Knock comes. Now is the
JANUARY
Buy Your Protection against mistakes as you buy your Beef, Potatoes and Fire Insurance.
"Let Us"
We Never Done
You any Harm
NOW AS TO THE PRICE.
DO NOT GLANCE AT OUR ADVERTISEMENT

SOME OF THE EIGHTEEN KINDS OF ADVERTISING

Written by John H. Patterson in the early days of the N. C. R. Co., and mailed in successive order to 5,000 merchants. See page 90

THE "THREE KEY SAMPLE"

When clerks and bartenders organized to oppose the introduction of cash registers, the agents found it almost impossible to reach proprietors of stores with their big machines. Mr. Patterson met this objection by making a small working model of the register, enclosed in a leather case with no marks on the outside to identify it with the N. C. R. Co.

John Patterson, when he bought the majority stock interest of the National Manufacturing Company, undoubtedly thought that he was buying into a real business. It turned out that all he really bought was the right to manufacture cash registers under the Ritty and Birch patents. He had made his price without looking at the factory and with only a cursory examination of the accounts. It would not have done him much good to examine the factory, for he knew nothing of machinery. And he might just as well not have looked at the accounts, for the largest item turned out to be extraordinarily shrinking.

The big item was "Accounts Receivable." When a register was shipped out to an agent on consignment, it went into this account at the list price which was, now that the detail adder had been put on, two hundred dollars. But when an agent sold one of these registers, he was entitled to a discount of fifty per cent. So, while an unsold register stood on the books at two hundred dollars, that same register when sold turned into only one hundred dollars in cash! The seller had not bothered to speak of this little oddity in the accounting—if indeed he knew it. Mr. Phillips, who sold the stock to John Patterson, was an entirely honest man and he had not sought out Patterson. Patterson had done all the seeking. Phillips had not sold; he had merely not dissuaded Patterson from buying.

But Mr. Patterson did not complain of the state of the assets nor of anything in connection with the company. Everything was so bad that he did not bother to decide what was worst. He knew that he was in to make the best of a bad bargain.

The factory was better than the accounting. It con-

tained a lathe, an old milling machine, a couple of screw machines, a drill press, and a printing press to print the rolls used by the paper-punching register. This was all the machinery really needed, for the register as then made was not at all complicated and working at top speed the force could turn out thirty registers a month—but such pressure was unnecessary, for the company had not been able to sell thirty registers a month.

John Patterson, surveying the prospects, decided that he needed sales more than a factory. He gave up the first day to a little elementary cleaning. He made all the men clean their tools. Some of them had been using boxes as seats; he had the boxes thrown out and bought stools. He had the stocks assorted and put neatly on shelves and made a rule that finished registers should be arranged exactly even on a bench. The men complained that the drinking water was not right; he bought earthen crocks and gave orders that they be filled every day with lemonade. This was the extent of his factory reorganization and it was characteristic. For the time being he left the manufacturing in charge of Frank Patterson.

Cleaning up the factory took all the first day and part of the second. Then he turned his attention to the cash register itself. For several years he gave great attention to devising improvements and took out many patents himself—but of this more later. One of the things he did was to buy for five hundred dollars a device by which the additions made by the adding wheels at the foot of the various denominational columns would read in dollars and cents. Previously the adding wheels had shown only the number of times that the particular key had been pressed. The indicators were of unpainted tin with stencilled figures. The amounts could be seen only a few

feet away from the register. Mr. Patterson put C. W. Stewart at work experimenting on how to get better indicators and in a few weeks they together evolved a white indicator with heavy black figures that could be read twenty feet away. Shortly he set about getting a better cash drawer and he bought the rights to a special drawer, the patent on which had been granted to one Michael Campbell. This drawer opened only when a register key was pressed. Instantly it made the register twice as valuable as it had been before and in addition it was a good selling feature in that the cash drawer was already known to merchants.

This marks the beginning of the policy of never considering the product as finished and which was to resolve into a definite policy a few years later when he formally established the inventions department, which became so famous. Mr. Patterson conceived of business as starting with the buyer; he went into the making of cash registers only because he thought every merchant would eventually have to use one. Thereafter he worked on the theory not of supplying what the buyer wanted—for the buyers then did not want cash registers; he worked on the theory of supplying what the buyer could use to the best possible advantage once he had been taught the need. As he then said to his people and repeated thousands of times afterward:

"Send in the complaints. They are our schoolbooks from which we learn what is needed and how to remedy the difficulty. We propose so to improve the quality of our registers as to make them look as finished as a watch."

He wanted everything exactly right. He went down to New York some time later and he came back with this on his mind:

"Why does the great firm, Tiffany & Co., Union Square, get such fancy prices for their goods and how have they become so wealthy? Simply by doing everything right, and this includes in detail every minute thing. Swift & Co., West Thirtieth Street, N. Y., who repair and paint Tiffany & Co.'s delivery wagons, told me that a stripe of one thirty second of an inch was ordered, but by mistake it was made one sixteenth of an inch wide. It was a small matter, but Tiffany & Co. would not receive the wagons and they had to be painted over. There is a best way for every detail connected with a register."

He started to put his theories into effect.

CHAPTER VI

LEARNING HOW TO SELL

THE business before Mr. Patterson was to sell—to sell what others had failed to sell. He subordinated all else to selling.

The expenses of the factory were slight. The rent, including power, was forty-two dollars a month; John and Frank each put themselves down for twenty-five dollars a week but there was hardly ever enough money in bank for them to get their salaries. The supplies were bought as needed from the hardware and iron shops about town. Otto Nelson was both office boy and purchasing agent—he ran out and got the supplies. The wood cabinets for the machines and all the castings were made outside. The plant did only the small finishing work and the assembling.

The big job ahead of Mr. Patterson was to get sales. He fussed with the factory only while maturing his sales plans. He changed the register only to give it a stronger sales appeal. In three days he had started after sales.

He first went to work establishing agencies. He got in touch with men who had sold cash registers as a side line, and offered to them exclusive representation for their territories. Remembering his experiences with Brooks coal and the lesson he had learned at school about the interchange of information, he could see no possible excuse for other than an exclusive right to sell in a district. This later developed into guaranteed territory—that is, if

an agent sold outside his own territory, the commission on the sale would go to the man who owned that territory.

He made commission arrangements with all agents. He reasoned from the very beginning that, since it was the business of an agent to sell, the agent ought to gain his livelihood exclusively out of what he did sell. As a matter of fact, the N. C. R. could not then have had salaried agents because it did not have the money to pay salaries. But the commission basis did not grow wholly out of necessity. It grew out of Patterson's elemental reasoning that a man must be paid for results and only for results. If a salesman could not make a living selling, then it was up to him to find some other job where he could make a living. However, Mr. Patterson at once realized that a salesman solely by his own efforts and without any help from the company might not be able to make a satisfactory living—and if he did not make a living then the company could not make a living off him. This is the general view to-day. It was by no means the general view in the early eighties. Then a salesman on commission was looked upon purely as a gamble. Selling on commission was not entirely respectable because only canvassers and life-insurance agents worked on commission, and neither class was particularly respectable. Business houses were not long-sighted enough to realize that it would pay them to make the work of their agents easier. They understood well enough that if a salesman were on salary he was an expense unless he earned his salary, but since a man on commission did not cost anything he was not bothered about.

Business in those days worked from the expense end. The big thing was to keep down the cost, and no one ever

rose to suggest that keeping down the cost was not the whole of business or that the most efficient way of keeping down the expense of doing business was not to go into business at all. Salesmen were hired on straight commission not at all to force them to consider their sales and the company's sales as one. They were thus hired only to keep down expense. If the agent made a sale, the company gained. If the agent did not sell, the company did not lose. A man never became a salesman on commission if he could find any one to pay him wages or salary.

Mr. Patterson very quickly applied his own fundamental reasoning to this situation. Why did a man become a salesman? To make money, of course. How could he make the most money? By selling the largest amount of goods. He could not afford to establish a paid sales force, but why should he if he could cause men working on commission to earn larger incomes than they could possibly earn as salary? He knew perfectly well that it is not human nature to work as hard when an income is assured as when the income depends solely on the effort exerted. It was not a new idea to put men on commission. It was a new idea to put them on commission in order that they could earn more. He started in at once to help them to earn more.

He got ten agents after a great deal of trouble and then only on the exclusive-territory idea, which was absolutely new. He showed the agents the immense amounts they could easily earn by canvassing their prospects. Mr. Patterson had unbounded faith that his register could be sold to a practically unlimited degree. He said the country needed a register to each four hundred people. He dazzled the agents with the prospects of what they could do. Most of the men he got were of the type known

as "born salesmen"—the type that gets into the ranks of the unemployed by fondling the notion that a born salesman does not have to work every day.

From each of these ten salesmen Mr. Patterson secured the names of five hundred prospective customers in the respective territories. This gave him a list of five thousand names. Then one morning Mr. Patterson came in with a carpenter. He had him build a long table and a shelf with eighteen compartments. Nobody knew what was going on. Mr. Patterson's next foray yielded half a dozen young men from a commercial college. Each of them carried several boxes of envelopes. He ranged the boys along the table, divided the five thousand names among them, and gave instructions that eighteen envelopes were to be addressed to each name on the list. When this job was done, each bin had in it five thousand addressed envelopes. Then the printer's man came along with eighteen different kinds of advertising matter, all of which had been written by John Patterson.

This advertising differed from any which up to that time had been seen, in that every piece held a reason why the purchase of a register would make money for the purchaser. It was educational advertising. He borrowed from the patent-medicine people the wrinkle of attaching testimonials of satisfied users. There were not many users and by no means all of them were satisfied, but Mr. Patterson made the gathering of these testimonials a personal affair. If the user were not satisfied, Mr. Patterson kept at him until he was satisfied. From the beginning Mr. Patterson insisted that no advertising could equal the word-of-mouth advertising of the satisfied user.

He reasoned out another fundamental. He never urged

customers to buy because he wanted to sell. He insisted then, and it is now everywhere considered a sound sales policy, that a sale should not be made to any one who could not make money out of what he bought. His messages all went to show the merchant's need of a register and not the N. C. R.'s need of a sale. There is a distinction here which is not yet universally grasped.

For eighteen successive days each of the five thousand merchants received from Mr. Patterson a piece of advertising matter. As far as I can discover, this is the beginning of concentrated sales pressure. I do not know how John Patterson got the idea that eighteen letters to each of five thousand men would be more effective than ninety thousand letters broadcasted to ninety thousand addresses. A shallow reasoning would decide on sending out to the ninety thousand. But Mr. Patterson knew that advertising would not of itself sell cash registers. Although he had bought his first registers by telegraph, he knew that the average merchant would not part with two hundred dollars unless it could clearly be shown that the two-hundred-dollar expenditure was going to bring in an equal revenue. He designed his advertising to educate the merchant into the belief that buying a cash register was a method of saving money and he thought that if he took a selected list and hammered at it continuously, the prospective purchaser (whom a year or two later he began to refer to as the "P. P.") would get around to thinking that there might be something in the argument. Then he was ripe for the salesmen. The response to the bombardment convinced him that he was attracting attention. One merchant returned the tenth letter of the series with a notation:

"Let up. We never done you any harm."

This method of mail education was kept up by Mr. Patterson for nearly twenty years and eventually resulted in a paper called *The Hustler*, which at one time went out to as many as half a million prospects a month. It had two American editions and Australian, English, German, French, and Norwegian editions. But of this more later.

Another testimonial to the efficiency of the attack was the defence organized by store clerks. In a year or two Mr. Patterson found out that envelopes bearing the name of the National Cash Register Company were carefully watched for by clerks and destroyed before they reached the proprietor. He took the name of the company off the envelopes. This worked for a while, but then clerks began to watch for envelopes postmarked "Dayton." For quite a number of years the advertising matter was each month mailed from a different city in envelopes bearing only the return address of the agent in the city.

The first big order brought both joy and sorrow. It was for sixteen detail adders and came from Chicago. Let Mr. Patterson describe it:

"Everybody around the place was jubilant. We got out advertising matter and flooded the country two or three times, showing photographs of the machines and pictures of the places in which they were to be used. When a payment became due in thirty days, I received a telegram that the registers would be returned!

"I went to Chicago to find out what was wrong. I was told by the proprietors that they had used the sixteen machines in seven different places for thirty days and there was not one register that balanced with the cash on any one day. They said they were no good, they were not accurate, and they did not want them.

"'The registers are right,' I answered. 'If this has happened something is wrong with your men.'

"They were very indignant, and said that the fault was with the machines.

"'You let them stay for a month,' I continued. 'Don't make any payments on the notes—just use the registers for thirty more days. By that time I will prove that the machines are right. If I don't, I will take them back and return what you paid on them.'

"They finally agreed, and I engaged two Pinkerton detectives to watch these places for thirty days and make a report.

"The detectives found that the salespeople had gotten together and devised all the means they could think of to get rid of the registers. Whenever any of the proprietors were in, they had friends talk about the registers. They would say that the firm must think they had a lot of thieves working for them and 'I wouldn't work any place where the boss thought I was a thief.' The clerks would make a sale of fifty cents and register seventy-five cents —purposely registering the wrong amount.

"After the proprietors read this report they were satisfied and accepted the registers. They said:

"'To make sure that there will not be any more trouble, we will pay cash for them.'

"They read the report to all of their employees, and concluded:

"'We have bought these registers and paid for them, and they are going to stay; the first person we find who is not operating them properly will look elsewhere for work.'"

This was the beginning of the detective system of checking up on the use of registers. For some years it had to be used largely.

The salesmen had not only to overcome the inertia of the proprietors but they had everywhere to fight the bartenders and store clerks as in Chicago. A cash register was considered a challenge to honesty. The purchase of a cash register was often the signal for a walkout. An agent, if he were known as such, was apt to be thrown out of the place. If he did get to the proprietor and sold him a machine, then the clerks tried to double-cross the register in every possible fashion so as to get it taken out. In a number of localities clerks and bartenders formed organizations to prevent the sale and use of cash registers and passed around information as to what to do to make the machines appear inaccurate. They had no end of tricks. When a customer handed in a quarter for a fifteen-cent purchase, the clerk, instead of registering fifteen cents, would press the "Change" key and of course the cash at the end of the day would not correspond with the registration. The customers were not sufficiently familiar with the registers to understand that "change" did not mean that they were to get change back. When Mr. Patterson heard of this wrinkle, he abolished the "Change" key and put in its place a big "No sale" key with a big indicator which could not be misunderstood.

The first agents sold by description. Mr. Patterson said that no man could be expected to obligate himself to pay two hundred dollars for something he had not seen. No effort was made at that time to get many prospects to come to an office or a hotel for a demonstration. Some agents carried full-sized registers around with them, but once the organized opposition to the introduction of registers was under way the agents found it almost impossible to get in anywhere with their big machines. Mr. Patterson met this at once by making a small work-

ing model of the register, known as the "three key sample." This he had enclosed in a leather case which had nothing about it to indicate the National Cash Register Company. This worked for a time, but then the information service of the opposition associations passed around accurate descriptions of the cases. Incidentally, the N. C. R. agents became quite unpopular with travelling men generally because every kind of sample case began to be looked on with suspicion. It was quite usual for a salesman entering a saloon with a sample case at once to establish that he did not represent the National Cash Register Company.

But the sales pressure told. In March, 1885, the company shipped seventy-seven registers—forty to purchasers and thirty-seven to agents. Mr. Patterson established a sales record which held prospect of a successful business.

Although the old registers seem crude as compared with the improved models of to-day, they were not crudely made. The mechanics employed by the company knew their business, as did most mechanics in those days, and one of Mr. Patterson's earliest innovations was an inspection department—or, to be more accurate, a man to do inspecting. Mr. Patterson himself was unofficial inspector-in-chief; he tried every register before it left the place; he had his eye on everything.

He had a habit of showing people through the factory. He thought it was good advertising to let the public see how registers were made, although he knew that it was not much of a factory that he had to show. This was in itself a new departure in manufacturing, for in those days the most commonplace operations were concealed as business secrets. If a man learned how to perform any operation especially well, he hoarded his knowledge as a

miser hoards gold. Mr. Patterson took exactly the opposite tack. He thought he could gain more from the comments of outsiders than they could gain from him. Anything they got they were welcome to. So he personally took in charge any one who cared to look through the factory. This has developed into the elaborate guide-and-lecture system by which visitors are now taken through the N. C. R. plant. One day, after he had explained the mechanism and the manufacture of the register to a group of visitors, he took them to a line of half-a-dozen finished registers which were supposed to have been inspected and ready for shipment. I think it was the largest group which up to that time had been assembled.

"Every one of these registers," explained Mr. Patterson, "is perfect. Try the keys. Nothing goes out of here until it is right."

It just so happened that one of the registers had not been finally passed. It was not working right and was due for an overhauling. As luck would have it, this was the first register Mr. Patterson tried. He pushed down a key and it did not come up again.

"There seems to be something wrong with this," remarked Mr. Patterson casually. "I will have to fix it."

He carefully lifted the register from the table to the floor, picked up a mallet, and demolished it. He liked to emphasize his rules in this fashion.

Some of those old registers are still in service. More of them would be in service were it not a policy of the company to keep users fairly up to date on the models. One register that had been shipped to St. Louis in March, 1885, came back in exchange to the factory after thirty-six years of continuous service. It was practically as good as the day it was shipped, excepting that the five-,

ten-, and fifty-cent keys and the dollar key were worn almost smooth. The ten-dollar key was also worn, but not because of the multitude of ten-dollar purchases. This 1885 model had an automatic cash drawer but no provision to open the drawer to make change, so it became a habit to use the highest amount key to open the drawer. To overcome this Mr. Patterson added the "Change" key that I have mentioned and which was superseded by "No Sale."

All of this pushing forward was being done without money. John Patterson went ahead absolutely regardless of expense. He quickly used up all his own money. The advertising was expensive. He could easily have cut down on his advertising but that he could not bring himself to do, because he regarded advertising as an absolutely essential part of the business. He thought it no more sensible to deprive the sales of the full force of advertising and expect the business to go along than to deprive the machinery in the shop of one half its motive power and still expect it to work. He was engaged in an educational campaign and to stop it for even a few months meant the loss of all that had gone before.

The cash registers then as now were mostly sold on the installment plan, the purchaser giving a series of notes extending over a period. This resulted in the profits of the company being mostly deferred. Proportionately, it did not cost very much to make the registers, but it did cost a deal to get out the advertising matter and to pay the commissions of the agents. The really pressing expense was advertising, for the expenses of the factory could be cared for largely out of the first payments on machines sold and the commission of the agents came out of the money that they collected. But the ad-

vertising had to be paid for out of new money—out of profit. And the profits were locked up in the deferred payments. It is hard to conceive of a more difficult financing problem.

The statements through these early years are lopsided —toppling over. For instance, on January 1, 1885, a month and a half after John Patterson had assumed active management, the concern was insolvent. The statement shows bills receivable, $367.50; cash, $129.78; book accounts, $4,734.77, which, adding the inventory, gave a total of $11,448.82. Against this he had bills payable of $11,701.48. The machinery was worth precious little at forced sale, and the few cash registers made up and on hand were worth almost nothing in any other hands. The company was really more insolvent than the statement. In May of the same year the total assets had jumped to $26,210.57 and there was an apparent solvency, the bills payable amounting to $18,648.16 and the accounts payable to $2,045.95. But this could hardly be considered a well-balanced statement, for the cash consisted of ninety-one cents of which eighty-eight cents was in the bank and three cents in the office safe! The company was owed $7,256.67 on open accounts and $1,439.72 on notes given by the purchasers of registers. The company's "Bills Payable" item was made up of promissory notes which Mr. Patterson succeeded in discounting at Winters' National Bank in Dayton.

He did not exactly have a line of credit at the bank, for a line of credit implies a certain facility in borrowing, and this was very far from the case. The first time Mr. Patterson needed money he went over to the bank and had a talk with A. A. Winters whom he had known for many years. He succeeded in getting a small loan.

The next time he needed money he went down and did the same thing. He gave the purchasers' notes as collateral when he had to, but every loan was on a personal basis and a result of selling and reselling the cash-register idea to Mr. Winters.

John Patterson had no idea whatsoever of banking. He merely knew that the bank had money which he could use in his business and that it was up to him to get it, and eventually to pay it back. The paying it back did not bother him so much as the getting, because he had the supreme confidence that he must succeed and that he must have money with which to succeed. The bank loans got up to thirty thousand dollars. Then Mr. Winters absolutely refused to advance any more money because very little of what had been loaned had been repaid. Mr. Patterson needed five thousand dollars more and he needed it at once and so he quickly shifted the basis of his argument. He said:

"Mr. Winters, I do not want to see the bank lose its money, but unless the company has another loan it will go under and the bank will lose."

He immediately became most solicitous about the bank —he put his own needs in the background and he stated the case so quickly and so clearly that Mr. Winters forgot that it was the Cash Register Company asking for money. He thought only of the bank protecting itself—which was exactly the way Mr. Patterson wanted him to think. Mr. Patterson left with the five thousand.

But in another week the company was just as hard up as before. And this time Mr. Winters said he was not going to send good money after bad.

The company was organizing new agencies and equipping them with registers. The business was increasing.

Mr. Patterson bought more machinery, and spent all the cash he could get hold of for advertising. He could get advertising matter from the printer only for cash. Here is Otto Nelson's story of one financial epoch:

"The business was run on remittances. When accounts were sent out for collection we figured when they would come back. Everybody in the office knew how much money the postman ought to bring, and if he did not bring the expected amount, it upset the plans.

"One Saturday morning a remittance of sixty-five dollars was due from Richmond, Ind. It had been planned to apply this to the payroll. When the morning mail came without the remittance, the bookkeeper said:

"'It will probably come in this afternoon.'

"But it wasn't in the afternoon mail, and the cash for the payroll was sixty-five dollars short.

"Mr. Patterson started planning to get the money. He went to the bank, but they would not let him have any more. He telephoned to one of the other stockholders requesting a loan, stating that three or four hundred dollars were due Monday, when he would return the loan. He was told that he could have it. Mr. Patterson sent me to get it. When I arrived at this stockholder's office, he had left and the clerk said he didn't know when he would be back. I telephoned Mr. Patterson. He said:

"'You wait fifteen minutes.'

"I waited about ten minutes and Mr. Patterson called up and wanted to know if he had returned. I replied that he had not, and he said that he would telephone to another stockholder and told me to stop there on my way back. I stopped at the place and was informed that Mr.

Patterson had telephoned but had been told that no money would be loaned.

"When I returned Mr. Patterson was worrying about how he would meet the payroll. He walked into the factory and tried to pick out enough men he could trust who would not say anything. There had been talk around Dayton that the following month the National Cash Register Company would be bankrupt.

"Mr. Patterson came back to the office and said:

"'I don't know what we shall do!'

"He walked back through the factory and looked the men over again. 'I wonder if I could get it from Steve.'

"It was about half an hour before closing time. He telephoned his brother Stephen, who agreed to loan him seventy-five dollars. He hung up the receiver, grabbed me, started me down the stairs, saying:

"'Don't you stop. Run all the way down there and all the way back. Don't stop for anybody.'

"Stephen Patterson was in his coal office on Ludlow Street, where the entrance to the Union Depot is now. I got down there as fast as I could. Stephen was very deliberate. I thought I was not going to get the money in time, but finally he gave it to me. I got back all out of breath and with only twelve minutes to spare!

"Monday morning's mail brought nearly four hundred dollars and the first thing Mr. Patterson did was to return the seventy-five dollars to Stephen. Then he paid one hundred and fifty dollars to get advertising matter from the printer and bought about one hundred dollars' worth of stamps. After that, cash for the payroll was laid aside early in the week."

Mr. Patterson was doing all this on his own initiative. The minority stockholders could not stand the pace.

They thought he was over-reaching himself. They belonged to the old school which thought that the way to make money was to cut down expenses. They stood aghast at the advertising bills—at putting out three and four hundred dollars at a clip for postage stamps. They knew all about business and they were going to stop the mad career of this man. They threatened to get an injunction. That threat did not get them anywhere. Then they bought another cash-register patent and informed Mr. Patterson that if he did not buy them out they would start a competitive business. Mr. Patterson did not want to buy—he did not have the money to buy. He tried to persuade Gus Sander and Charlie Whealen, who were the men holding most of the minority stock, that some day their holdings would be valuable and that they would see a million cash registers in use. But he was talking to frightened men—they would not listen to him. They wanted to get out and that was all there was to it, and they were willing to do anything that would get them out—for cash. They would not take anything but cash for their stock. John Patterson had no cash.

This time the bank could not be brought around to lending him money to buy stock. He could not borrow the money anywhere. The only property he had was his share in the old farm and this he sold for the amount he needed—which was sixty-five hundred dollars. Even then the price was ridiculously low—so low that Mr. Patterson asked the purchaser not to make the price he paid public. The property he then sold is now worth more than one hundred thousand dollars.

But he had full control of the company!

GENERAL LEONARD WOOD VISITS THE N. C. R. FACTORY

MRS. JOHN H. PATTERSON

With her two children, Dorothy Forster Patterson (now Mrs. Noble Brandon Judah, of Chicago), and Frederick Beck Patterson, the present president of the N. C. R. Co.

CHAPTER VII

THE PRIMER AND THE START OF BIG BUSINESS

MR. PATTERSON often made this statement: "There are two things to which I must devote the greater part of my time—the first is advertising, the second selling. If we advertise properly we pave the way for our agents. If we have a thoroughly trained selling force, the men can sell our goods in good times or bad. The important things to do, therefore, are to improve our advertising and improve our sales force. If we get the orders we can easily manufacture the product and make the proper records, but first we must get the orders."

I said in the first chapter that Mr. Patterson was not a salesman. It is not on record that he personally ever sold anything—which is probably the reason why he was so remarkably effective in working out sales methods, for he was not hampered by having his view narrowed by his own experience. But it was a sore point with some of the old salesmen. One day he criticized a demonstration made by a fairly successful salesman, and the man burst out:

"I have sold one hundred and eighty cash registers in a year. That's good. I'm a salesman selling all the time. Did you ever sell one?"

"Yes, that sounds reasonable," answered Mr. Patterson. "You ought to know."

Then, as though to change the subject, he began a

critical examination of a table in the room. "This is a fine table, a very fine table. It's all quarter sawed oak. You must have paid a good deal of money for this table. I couldn't make a table, but I do know this is a fine table."

The salesman got the point, and as he was leaving Mr. Patterson remarked, casually:

"If you sold a hundred and eighty registers demonstrating that way, you would sell four hundred demonstrating the right way."

When Mr. Patterson took over the N. C. R. the only full-time agent was Robert Callahan in Washington. By 1886 he had five first-class men and he called them to Dayton to discuss the prices of the machines. In addition to Callahan, there was Harry R. Blood from Chicago, C. R. Lord from Boston, John Crawford from New York, and Walter Cool from Denver. They met at the old Phillips Hotel. Harry Blood fell ill and could not leave his bed. John Patterson, calling to see him, asked for the first time a question that he was to ask many thousands of times in later years. He asked:

"How do you sell?"

Blood had been making a remarkable record. He was a well-known character about Chicago and where other salesmen had been quite content to sell a single register in a saloon Blood had recently managed to sell a register for each barkeeper. He told Mr. Patterson how he made his sales. He had no real method, for he sold largely on personality, but his big point was that he never brought up the matter of a cash register until he had made friends not only with the proprietor but with all the people who would use the registers.

"All the rest of the men ought to know about this," exclaimed Mr. Patterson, and that was the real beginning

of what later developed into the N. C. R. method of training salesmen. And also it was the beginning of the convention idea, for telling Blood's story started the other salesmen to telling their stories. Mr. Patterson drove them out in a tally-ho to the soldiers' home. He always believed in doing everything in good style. He asked Joseph H. Crane, who had married his sister Julia and who was known as the best wall-paper salesman in Ohio, to sit in with them at their meetings. Mr. Patterson asked Crane what he thought of the cash register, which is another characteristic action, for it was a habit that grew on him to ask those who were at a meeting what they were getting out of a meeting and what they would do to improve it.

"You have a good product," answered Crane, "but you don't know how to sell it."

"Don't know how to sell it?"

"Yes, you are trying to sell a man in his store instead of at the hotel."

And then he went on to explain that in order properly to make a sale the prospective customer ought to be taken away from the annoyances and diversions of his store duties and brought to a place where he could give his sole attention to the register. The meetings were such a success that when they were over Mr. Patterson said:

"We have all learned so much that I think we ought to have a meeting every year."

And this was the beginning of the famous N. C. R. conventions.

The company sold ten hundred and fifty registers in 1886—which was more than double the number they had sold in the previous year—and also in that year Joseph H. Crane came regularly with the company. He and his

brother, James Crane, had tired of travelling and had opened a big wall-paper store in Dayton, which then had about fifty thousand people. It was a fine store, but it was a store big enough for a city of half a million and the Crane boys could not make it go. The importance of Mr. Crane to the organization can hardly be overestimated, because his methods of salesmanship were eventually impressed upon all the N. C. R. salesmen through what is known as the "N. C. R. Primer," and which represents the first attempt anywhere in the world to make selling other than a purely individual effort.

In the guaranteed-territory plan Mr. Patterson had not so much introduced a new idea as made a policy out of what had been in many firms a custom. In his intensive circularization he had only done more regularly what others had done less regularly. In deciding to have an annual convention of salesmen he had inaugurated a practice that was new only in its regularity. But in the primer—in attempting to lay down the exact words which each salesmen should use—he hit upon something absolutely new, and in the manual which followed the primer he also hit upon something else absolutely new. The primer contained the sales talk; the manual contained an answer to every possible question that a prospect might ask. It was all in line with his thought that there was only one best way of doing anything and that when that one best way was found, all should follow it.

The first primer was brought out in June, 1887, and, since there is a good deal of confusion not only as to its origin but as to the date of its origin, it is particularly fortunate that a first-hand account by Joseph H. Crane has been discovered. Some years later, talking before a convention in London, Mr. Crane said:

"Mr. J. H. Patterson came to me with a proposition to join the company and sell machines.

"At that time I had been selling goods for nearly twenty years, and he thought I had experience enough and would succeed. He offered certain inducements, and was very sanguine of the future. I shall never forget how hopeful he was. I remember one thing he said to me as an inducement to join:

"'Last month we sold twelve registers; but, mark my words, the time will come when we will sell five machines a day!'

"I said: 'Don't let your enthusiasm carry you away—don't go too far.'

"He said: 'I fully believe we shall sell five machines a day.'

"I consented to go with the company. I had a job when I joined the company, had a boy two years old and one two months old, and needed enough to keep their mouths filled all the time, yet I gave it up to sell registers on commission. I had nothing ahead but enough to pay my expenses for a week or two when I started out, but I realized that in selling these registers it was necessary to understand them, so I spent an entire day in the factory in a fruitless endeavour to take a machine apart, and up to about five o'clock I had utterly failed to get it apart. I went home feeling that I had done a good day's work, and the next day I tried to put it back again, and failing that I felt myself fully equipped to go out and explain them!

"So I went, and I want to say to you right here that on my first trip I took with me a full line of registers, all we then made, five. I took two paper machines and three self-adders; we call them detail-adders now. That was

a full line. The 30-key detail-adder was the king of them all. In my wisdom I selected the town of Findlay, Ohio, as the place to open my career in, and I showed my good judgment, because that town had a boom on.

"I arrived at Findlay about 4:30 in the morning and I was unable to secure accommodation in the hotel, the 'Joy House,' but the next night I was successful in inducing a local barber to allow me to sleep in one of his chairs. The second day I got half of the parlour of the 'Joy House' in which to show my samples. I wish you gentlemen could see the 'Joy House.' You would appreciate what having half the parlour meant. Anyway, I got it, and then I started out with my enormous fund of information on National Cash Registers to interview the enthusiastic merchants of Findlay. At six o'clock on Friday night I had secured interviews and made demonstrations to sixteen merchants. I had not secured any signatures and wanted to know why. After I had explained to a man all I knew about the machine and a good deal I did not know, some would say: 'Our people ought to have them,' and others that 'I will ask my partner.'

"After the first man went out I went to the machine and said to myself: 'There is a point I forgot to explain, and there is another and another.' I meant not to forget these points again, so I got the back of a statement slip and made a note on the top of that slip of the things I had forgotten to tell 'A' and the second and third things I had forgotten to tell 'B.' I asked myself the same question when the third man went out without signing—I had forgotten to tell him certain things about the register. When those sixteen men had gone out I still found that there were things I had forgotten, and I know that the

reason those people did not buy was because I had not done justice to the machine.

"The little bunch of money I had borrowed for expenses was getting weak and I was getting worried. My birdies back in the nest had their mouths open and it was necessary for me to contribute. That night I went to see a man who had a restaurant, and after some time I secured his order for a Number 2. Then I felt better. The next day I closed three of those sixteen, and then I went ahead and did pretty well the following week and from then on.

"While I used the memorandum I had prepared, I revised it from time to time, as I realized that to get a man's order it was necessary to explain the entire machine to him. I knew more at the end of a week than I did when I started with the machine. I knew it was a good thing, and I was being educated to the fact. I realized that it was necessary to transfer my information to a prospective purchaser. That was all that was necessary, but it had to be done in a systematic way. The first thing I mentioned was the sign, the next was the indicator, then I demonstrated the machine and used some money to illustrate it, and finally I got so I did not have to refer to this memorandum every time, and later it became unnecessary to refer to it at all. I tore it up as I found I could explain the points in the same order, and almost in the same words. At the end of ninety days I realized fully that I was saying the same thing to every man and I had been successful—rather more so than any one else.

"Mr. J. H. Patterson called me in one day to his little office and asked:

"'How do you sell registers? What is your method? What is your system?'

"'You would be amused,' I answered, as I felt my chest

was out. 'You should put your ear to the keyhole and hear me make a demonstration.' I think that was the way we started with that word 'demonstration.' 'I say the same thing, word for word, to every one of them.'

"'You don't mean that, do you?' exclaimed Mr. Patterson.

"'I do; I go right over the same thing.'

"'Well,' he said, 'that would become monotonous.'

"'It has never got monotonous yet. The reason it is not monotonous is because it is to different people every time.'

"'Now,' I said, 'you sit down on this seat. You forget everything you know about a cash register and imagine yourself a grocer in a country town. You never heard of a cash register, and I will explain it to you in my successful manner, and then I want to ask you whether or not you understand and appreciate it, not knowing anything but what I tell you.'

"I went through my little talk. After I had finished, I asked him if he would have bought. He said:

"'Yes.'

"Just then a big man with a tall cap on came in, the vice-president (Mr. F. J. Patterson). He asked:

"'What is going on here?'

"Mr. John Patterson got up from his chair and said to the vice-president:

"'Sit down on this chair and forget everything you know about a cash register. Imagine yourself a grocer in a country town, and Mr. Crane will explain the register to you, and then see if you understand it when he gets through.'

"It was the first demonstration. I knew it so well, I had said it so many times. That is the reason I could

not forget it. I could say it with one hand tied behind me. So I went through it.

"The idea was simply this: I knew that a cash register was a good thing. I knew that retail merchants ought to have it, and if they knew this as well as I did, they would buy. My only duty was to explain all about it from beginning to end. I could go off at a tangent, take up an objection, and go back where I left off, because I had done that so many times. The president said that was a good idea, and that it was the solution. I said that there were a whole lot of men who were better salesmen, but who did not sell so many machines, because they did not do it systematically.

"'I will call the stenographer; you dictate this to him and get it typewritten,' said Mr. Patterson.

"Mr. Patterson had copies made and sent to every agent. We had twelve of them. He said:

"'Crane sells more machines than any of you fellows, and he sells them this way. I suggest that you all learn this.'

"A little later we had it rewritten, for we were putting improvements on the machines all the time. We called it 'How I Sell National Cash Registers, by J. H. Crane.'

"I have the original primer, and, I think, the only copy. What it says in that primer (not because I wrote it) we do yet. It says in that primer: 'When you go to a town, stop at the best hotel and get the best room you can.' That was right then; it is right now. You are representing a first-class concern—do it from the shine on your shoes to the room you occupy. Look it. Have the virtue, but assume the virtue if you have it not. Then I said:

"'Have a table for each register, cover each register.

Sit the customer with his back to the light, and so arrange the position of the machine that while you are explaining one the others are not in sight.'

"That is right to-day. That is the reason we have a demonstration room where there is nothing to distract the customer's attention. We have something to tell him, and it is important to him that he understand all we tell or show him. Don't let anything distract his attention. We don't have calendars on the wall; we used to have clocks, but we found when a man was about halfway through his customer wanted to go to luncheon. Calendars remind a customer of time.

"We changed the name of the book. There was too much 'Crane' about it. We called it the primer. The primer has been revised. I have learnt them all. It has been revised several times, until now we feel that the primer is up to date. It can hardly keep pace with the registers, as we are continually adding improvements, but we must talk primer and add the new features as required."

The primer marked the beginning of a departure that had been in Mr. Patterson's mind ever since beginning the business, and that was to get away from having so large a proportion of its production sold to saloons. Already in the few years that he had been managing the company the check that the register held on barkeepers had become so thoroughly established that it was hardly necessary to sell saloons. They bought almost as a matter of course. Mr. Patterson was not then a teetotaler and the agents, spending so much of their time in saloons, were anything but teetotalers. But it was a phase of business with which Mr. Patterson did not want to be connected. He had already firmly in mind the belief that making and

selling cash registers was performing a service and it did not go at all with his ideas to have that service exclusively confined to the saloon trade. That is one of the reasons why he was so intent on having his salesmen learn the primer. It is also one of the reasons why the word "saloon" never appeared in the lists of purchasers which went out every week. A "saloon" was either a "café" or a "hotel."

By 1887 the number of agents had greatly increased, and instead of selling only to saloons, as in the beginning, the registers were going into ten lines of business and were beginning to be fairly established in drug and grocery stores. They sold nineteen hundred and ninety-five registers in 1887—that is, not quite double the number of the previous year. This was the eventful year. The convention, which had been such a tiny affair in the previous year, was this year a big affair and the Dayton papers gave a whole page to it. The agents were told that they were expected to learn the primer. They received the news without enthusiasm and mostly proceeded to do as they pleased.

Mr. Patterson kept to his theory of devoting most of his time to advertising and selling, and he brought out the first issue of *The N. C. R.* which, I believe, was the first house organ ever published. The publication of *The N. C. R.* came about quite naturally. Mr. Patterson wanted to be constantly in touch with all of the agents. He thought that a business should not have secrets but that what one agent knew was good for every other agent to know. He believed that the progress of business depends upon the interchange of information among those in business—the very idea on which System was founded—and he wanted to establish not only an

easy method of communication with the agents but also a forum in which the agents could tell how and why they made their sales. As he said later:

"The success of this company has been due to the enthusiasm we have been able to inspire in it, by persevering, by coaxing, by forcing, by recognizing merit, by publishing good things done, by offering prizes. To be successful you must not only have ability but you must treat your men so that they will have confidence in you and in the company."

He had been sending out bulletins and notes to salesmen. In bringing out the first issue of *The N. C. R.* he defined its purpose thus:

> In place of sending out circulars to agents, we will issue every two weeks a small paper devoted to the interests of all connected with this company, and to be distributed only to its agents. Its principal object will be to distribute information and serve as a medium for asking and answering questions among agents. The first issue will be soon after June 1st. The first copies will be rather insignificant, but we trust not uninteresting. While we prefer to publish the names of contributors, we will not do so if the agents desire to sign anonymously.
>
> We would be pleased to know the manner of selling adopted by different agents, what they think their strongest points; points to avoid as well as points to make. This paper is especially to assist agents and we trust they will not only take an interest in but contribute largely to it.

In the first issue (J. H. P. was himself the editor) he published a long letter from J. W. Allinson telling how he was selling registers in Great Britain. Some of the agents had been in the habit of letting down on their sales after a certain number of registers had been sold in a month, from a fear that their commissions would be reduced.

It was then the pleasing and intelligent custom among many employers of reducing commissions if an agent seemed to be making too much money, just as it was later the custom among descendants of these employers to cut the piece rates when any employee seemed to be doing too much work, or, rather, getting too much for it. He gave an article in this issue to commissions and in it he said he was trying to force agents who were making only seventy-five dollars a month up to six hundred dollars. The first issue of *The N. C. R.* brought out this letter from Harry Blood:

GENTS:—The first edition of your paper received, and the first I had known of its publication. The idea is a good one, and when all the agents become familiar with it I think those having the register sales at heart will contribute largely.

The system I have of working my territory is, I think, a good one if followed up. I take the names of all I call upon, and if not successful in closing the sale, I classify their names and business, and continually mail them circulars and testimonials from users in their immediate vicinity. Before I call again I write them with a typewriter that I will call again on such a date, etc. An instance from the circulars that occurred in Attica, Ind., shows the circulars are profitable to me. I was unable to sell a party there I knew needed a register. On my return home I mailed him for a few days a circular sealed in each mail. His order came by mail to me. Another, two parties in Bloomington, Ill., who I knew ought to have a register, would not buy when I was there, and for ten days I mailed them circulars, then wrote them when I would next call. When I did call, I took their order without much trouble, and I am satisfied without the circulars I would have waited a long time before these orders could have been taken. This week I will visit a few towns in Michigan, where I have been mailing circulars, and will write you my experience of what value the circulars have been to me.

Crane's letter in the last issue is good, and the talk very effective. The system of having the bell ring after every sale enables the proprietor to more carefully watch his business, and in stores where

they charge a large number of accounts in one day I recommend the system as used by Pierce & Co. of Oakland.

My sales the past two weeks were to merchants as follows: Groceries, boots and shoes, restaurants, hardware, saloons, and R. R. lunch counters. When the agents sell to any merchant outside of those I would suggest they inform us. I have an application from a man running a flour mill.

H. E. Blood.
Chicago.

Mr. Patterson not only put into *The N. C. R.* the records made during the month by each salesman and as much of their methods as they would write in to him, but also he began to go around among the agencies himself and to publish in the paper the most interesting experiences that he encountered.

He made up this list of "Don'ts"—which is of almost general application.

Don't advertise the Register as a thief catcher.

Don't try to make out clerks are all stealing.

Don't do all the talking.

Don't answer a question except with the truth.

Don't wait for a man to come to your office to buy.

Don't stop calling on a man if he says he doesn't need one when you know he does.

Don't think the people in your territory are harder to sell than anywhere else. We know by experience they are not.

Don't try to sell a systematizer without a system.

Don't imagine we make any more money than any retailer when they sell the same amount. Our expenses are terrible in comparison.

Don't think you can handle a territory of 1,000,000 inhabitants. It has been proven to us that a small territory is more profitable than a large one.

Don't think a firm is doing too much business to use our registers. There are but few exceptions where they cannot be sold.

Don't fail to write us when any points come up that you are not familiar with.

Don't remain idle.

Don't read these once, but twice. We want you to make money and don't want you to fail.

Don't forget while trying to sell a storekeeper to call attention to our credit books for registering credit sales.

He found that publishing the number of registers sold by salesmen was unfair because it did not show the relation of the salesman to his opportunities. He said:

"Experience shows a register can be sold for every four hundred people in every town in the United States. Divide the population of your territory by four hundred and the result will show the number of registers that can be sold in your territory. Multiply the result by your commission. The result will be the amount of money you can make providing you push the business."

Thereafter, instead of publishing the number of registers sold, he published the percentages of realization to the possible realization on the basis of one register for each four hundred people and together with it the gross sales by points, twenty-five dollars being a point. Out of this grew the quota system, which is another of Mr. Patterson's innovations in business.

Eventually the whole United States was divided into districts on the basis of population and a quota for each district set; first on one register for each four hundred people, and later, on experience and the growth of the population. Each district was supposed to sell its quota not once but every year, which up to that time was an absolutely unheard-of idea in a non-perishable product like a cash register. The sales thought had always been to sell a district and then pass on to a new one. Mr. Patter-

son believed that if you sold a hundred registers in a district this year you ought to sell at least a hundred in the same district the next year. It was a bold and revolutionary idea and is another distinguishing feature of American salesmanship on the Patterson model. And through all these years, although N. C. R. quotas have often been increased, never have they been decreased—although as far back as 1890 wise men, thoroughly steeped in the traditions of business, were beginning to talk about the country having reached the cash-register saturation point!

In 1888 Mr. Patterson married Katherine Dudley Beck, of Brookline, Mass., a member of an old New England family, a woman of charming personality, fond of riding and outdoor sports. Shortly after their marriage he bought the home of Robert Steele, at First and Ludlow streets. This house is now the N. C. R. City Club, where educational and recreational activities are carried on for employees. Many community meetings are held here. June 22, 1892, Frederick Beck Patterson, now president of the National Cash Register Company and the only son, was born. October 27, 1893, Dorothy Forster Patterson, now Mrs. Noble Brandon Judah, of Chicago, was born. In the spring of 1894 Mrs. Patterson contracted typhoid fever and, after a brief illness, died in June of the same year.

About 1888 the Cash Register Company was beginning to make itself a power. It had its selling ideas born. It was not much of a company but it was beginning to make a great deal of noise—although that noise was not taken seriously. Its annual convention was already a feature of Dayton. No one but Mr. Patterson knew how really precarious the business was or how he had been twisting and turning the dollars. He knew but he did not care,

Tuesday, April 29th
"The air is best on the top of the hill"
Wednesday, April 30th
"A friend's eye is a good looking-glass
Thursday, May 1st
"Avoid the company of tale bearers"
Friday, May 2nd
"When you breathe, fill your lungs"

A BELIEVER IN POCKET NOTE-BOOKS

"J. H. P." started the habit back in the coal days of carrying in his vest pocket a little two-by-three-inch book in which he had his schedule for the day and in which he also jotted down every fact which he thought would be of use to the company

MR. PATTERSON'S BEDROOM EQUIPPED FOR REST AND WORK

for he could not see anything but success ahead. He said:

"Business is founded on confidence; success on coöperation."

He had the confidence and he was gaining the coöperation.

CHAPTER VIII

THE BIG DRIVE

JOHN PATTERSON kept unceasingly pushing the advertising and selling. He was spending a good deal of money on advertising and he found that much of it was being wasted. Many of the circulars were being torn up by clerks. He found that the agents did not understand what advertising meant, and in one office came across an accumulation of forty thousand circulars. All the advertising was direct and sent in sealed envelopes with two-cent stamps. Even in 1889 he was spending an average of four thousand dollars a month for printing and postage, and he calculated that each register cost $5.24 from the home office for circularizing. This he thought was high. Therefore he determined to have an advertising manager, and in February, 1889, he engaged T. C. Coffman. Then in the fall of 1890 Mr. Patterson sent for E. D. Gibbs, now the advertising manager of the B. F. Goodrich Rubber Company.

"I went with the National Cash Register Company as advertising manager in the fall of 1890," Mr. Gibbs told me. "I knew nothing much about advertising—all I possessed was a few original ideas. I made up some of these, the company bought them, and later on I received a courteous letter from Mr. J. H. Patterson inviting me to go to Dayton at his expense to talk over advertising matters.

"The factory I saw on the first visit wasn't much to

boast of. The officers of the company had no mahogany desks and there wasn't an oriental rug to be seen. Cheap wooden partitions separated the offices. Mr. Patterson offered me the position of advertising manager.

"'When would you want me?' I asked.

"'Next Monday,' he replied. The interview took place Wednesday. I gathered the impression that he did things quickly. The impression still remains!

"Now in view of all the publicity the N. C. R. has had during the past few years on the matter of salaries, it might be interesting to mention the pay I was to receive. Mr. Patterson said:

"'The highest-paid official in our business—one of our oldest employees—gets $37.50 per week. I will pay you the same.'

"I accepted. Twenty-five dollars a week would have looked good in 1889. Dayton, then as now, had cheap markets and house rents were low. So I went to work. But instead of going to Dayton the following Monday I visited, at Mr. Patterson's suggestion, all of the eastern and central offices of the company.

"'We know nothing about advertising,' said Mr. Patterson, 'but we want to learn. Some day we will have a big business. Good advertising will get it for us. Visit the agents. Secure all the ideas from them that you can. Find out their needs. Those men are in the field and they know what is needed.'"

John H. Patterson never pretended to know anything about advertising, but as a matter of fact he was probably the first man in any business other than the patent medicine to make advertising an integral part of his business. His ideas on advertising will be taken up in another chapter, for they are a subject all of themselves. It is here

enough to say that he believed the only advertising worth while was that which advertised *for* business. He had no time whatsoever for what to-day is called "institutional advertising." He did a great deal of institutional advertising but he did that through the institution itself which, as soon as he could afford it, he practically put on a billboard and then saw to it that it stayed there. But all his direct advertising, and later, when he came to use it, all his periodical and newspaper advertising, were directed to the single point of showing prospects that they needed the cash register. Every piece of advertising had to be simple and obvious and contain an illustration of a cash register. He was continually changing his advertising manager. He could never find an artist that suited him because they would insist on drawing pictures as pictures instead of pictures to tell the use of the cash register.

But at this time advertising had not been largely developed beyond what were called the "outputs," *The N. C. R.* and other direct matter. He had been working to overcome the objections of the clerks. He put in and for many years maintained a "Clerk's Corner" in *The N. C. R.*, which contained suggestions as to how clerks might make themselves more valuable. He held prize-essay contests for clerks. And already he had seen that the cash register could be made considerably more than a mere checking device and begun to do something in the way of working out systems for storekeepers. By 1892 Mr. Patterson and Mr. Gibbs had evolved quite a series of booklets for storekeepers. Among them were: "Five Years' Experience of a Retailer," "The A. B. C. of Business," "Economy and Extravagance," "Net Saving," "On the Road to Riches," "The Refinement of Trade," "Stop the Leaks."

Business was good but he was already looking ahead for trouble. In December, 1888, he said:

If you have had many years' business experience you will have noticed that for a series of years times seemed prosperous. Pig-iron, real estate, and other staples advanced. Then, after a certain period, the highest notch in prices was reached and the decline in prices commenced, and all business was on the down grade for a certain number of years. We don't mean to say that during a certain period all business men made money, and during a following period all business men lost money, but that it was much easier to make money during the first period than during the latter period. Buckle, in his introduction to the "History of Civilization," tried to prove all events moved in cycles; that knowing the number of suicides in the world during each of the past three hundred years, he could arrange a table by which he could tell how many suicides would occur each year during the next three hundred years. On this same principle that history repeats itself, Benner has founded his prophecies for business men. We know he has prophesied correctly for the past fourteen years, and we propose to be influenced by them in the future. We are all in excellent shape to get our share of the boom. Let us not wait three years to see if he is correct, but let us put forth every possible energy and commence now, so that when the cycle of low prices sets in at the end of '91 we will not be left stranded on the shores of poverty.

At the last convention it was thought that orders for registers would increase to thirty daily. So confident were all the representatives of accomplishing this result that the factory, at large expense was prepared to meet such a demand.

A large amount of new machinery, amounting to nearly thirty five thousand dollars, was bought. Brass foundry and carpenter shop were built, all unnecessary material stored away, space economized, and new men trained in the factory and offices to take care of the increased business.

Instead of thirty orders daily we are receiving on an average about seventeen orders daily. We turned off part of our force and still have accumulated over three hundred registers. What shall we do? Stop the factory? Cut down our force, or will you come to the

rescue? The crisis has come. We have never appealed to you in vain, we will not this time—now for it. Let each man bend to his work as he has never done before and send us in more orders than ever.

At every convention he had been asking the agents to give their experiences—to tell what objections prospects made to purchasing registers. And Mr. Crane's system of never trying to sell a prospect in his own place of business was continually preached. The Crane method was to call upon a merchant and, after sizing up the store, to interest him in a plan to save money. Mr. Crane carried nothing excepting some pieces of sales literature hidden away in his pocket. He called this visit his "approach" and it was designed solely to get the merchant over to the hotel or show rooms for a demonstration. Mr. Crane always considered it one half of the transaction. Actually making the sale was the other half. The big point that he urged upon all the salesmen was never to hesitate in answering a question. It became one of the mottoes of the company: "If you hesitate, you're lost."

But there were some questions that no agent could answer, and for these Mr. Crane devised a stock answer, which has ever since remained in the instructions of the company. If the merchant asked Mr. Crane a question he could not answer off-hand, he invariably replied:

"Why, that's just the very reason you should have one."

The prospect was fairly certain to ask:

"Why?"

All of which not only gave Mr. Crane an opportunity to think up an answer but cleverly shifted his position from the defence to the offence.

All the agents were expected to know the primer. Very few of them did know it, but business in 1891 and 1892 was

so good that Mr. Patterson did not have time to follow them up. The company sold fifteen thousand registers in 1892 as against five hundred registers in 1885. Those who did learn the primer profited. In practically every case where an agent memorized the sales talk and did exactly what the company told him to do, he at least doubled and often tripled his sales. The primer was a proved success, but as yet the company, principally because of the large amount of business coming in, only requested the salesmen to use it, they did not insist upon its use. Mr. Patterson did not want to antagonize the salesmen as long as they were producing.

The objections made by prospects and the arguments which the salesmen had used to overcome them had been recorded in the minutes of the various conventions and printed in *The N. C. R.* but they had not been gathered together in the covers of one book. The officers of the company decided that these questions and answers ought to be brought together in a manual so that no salesman would have to depend upon his own ingenuity to make a suitable reply. They sent out questionnaires to the salesmen, asking: "What do you say to a prospect when he states that he does not need a cash register? What reply do you make to the objection that the registers are high priced?" And so on.

To Mr. Gibbs fell the chief labour of compiling the "Manual," and this is what he has to say about it:

"The primer told the salesman what to do during the demonstration. The manual prepared him for the interview, gave him valuable advice on his attitude toward prospects and customers, and furnished him with hundreds of arguments to use in demonstrating the product or overcoming objections.

"It was divided into four main parts, namely, Salesmanship, Approach, Demonstration, and Closing Arguments.

"Salesmanship dealt with such subjects as self-respect, knowledge, enthusiasm, system, reasons why some salesmen fail, how to cultivate a territory, working a field closely, door-to-door canvass, samples, advertising matter and how to use it, how to fit up a hotel room, equipment of office salesrooms, dignity and poise, personal appearance, etc. Much of the material for this division was secured at the salesmen's meetings we held in different sections of the country, as it was our rule to make complete stenographic reports at these meetings. The material thus secured was sent back to the factory for analysis and distribution to the different divisions of the business.

"The second division of the book was devoted to Approach. A salesman was told how to introduce himself, what to do and say at first interviews, how to handle himself at critical moments, things to say to a storekeeper to get his attention; and last but not least, this division contained that big feature which has been so widely copied by other concerns: objections and the proper answers to make to them. It is easy to see what a valuable feature this was—to appreciate what it meant to new men when they had this array of arguments used by the crack salesmen of the country at their command. And this book, mind you, was compiled back in the nineties, long before we had the elaborate sales-making plans of the present day.

"To give an idea of objections answered in the manual, I quote the following:

"'I don't need one in my business.'

"'Times are too hard.'

"'I cannot spare the money.'

"'My present system is satisfactory.'

"'I promised my wife not to buy any unnecessary article.'

"'It is not suited to my business.'

"'Your company makes too great a profit.'

"The third heading, that of demonstration, contained advice to the salesman on his mental and physical equipment, the correct method of showing the various models, the proper way of receiving a caller, the importance of winning the confidence and respect of clerks, and such other information as would help a salesman in his contact with prospective buyers.

"Take one of the items, that of handling a prospect. Here are a few paragraphs selected from dozens on the same topic:

"'Learn to size your man, his peculiarities and mood. All men like honesty, politeness, and earnestness. All men admire persistence.

"'Nine times out of ten you can bank on facts to fetch your men. Make them clear as glass; strong and few. Don't bewilder a man with a mass of trifling arguments. Tie to a few important points, drive them in and clinch them. But tell him what he wants to know. If a trifle will close him, it's no trifle.

"'A few men can be driven; the majority must be led.'

"The fourth division, closing arguments, applied to getting the order signed. The whole art of salesmanship might be summed up in those four words: getting the order signed. A man's approach may be perfect, his demonstration clear and well made, but if he cannot put a climax upon the presentation of his case by bringing up

good closing arguments his efforts have been useless, his time lost. The manual says:

"'That critical time, when a prospect is ready to sign, is an unknown quantity. It can only be learned from experience. There is always a time when a man will sign. The successful salesman is the one who knows when to present the order for signature. The introduction of the order to the prospect's sight is, perhaps, a critical moment. Good judgment and taste on the part of a salesman are necessary in presenting an order form to a probable purchaser. If the right moment is chosen, when he is in the proper mood, he does not hesitate to sign it. A bright salesman will learn when the proper time comes, and present the order for signature.'

"Here are ten of the Don'ts:

"'1. Don't fail to seat the prospect properly.

"'2. Don't point your finger or pencil at him.

"'3. Don't sit awkwardly on your chair.

"'4. Don't have a calendar on the walls. It may remind him of an appointment or a note falling due.

"'5. Don't put your feet on his chair.

"'6. Don't smoke.

"'7. Don't slap him on the knee or poke him with your finger.

"'8. Don't chew gum or tobacco.

"'9. Don't tell funny stories.

"'10. Don't talk fast—go easy and see that the prospect understands what you say and do, etc., etc."

"These paragraphs could be copied by all manufacturers whose goods are sold by personal solicitation:

"'*Things to remember.*

"'Remember that you explain the register to customers for the purpose of securing their orders. The part of a

salesman is to do and say that which will bring about this end.

"'Do not intrude your personality on the notice of the prospect, but try to make him forget you and become absorbed in studying the register. To do this you must forget yourself.

"'You must interest the prospect in the register and what it will do for him, or he will not buy it. You must get him interested at the start, and hold and deepen that interest until you are through with him. Watch him carefully while you are talking, and avoid long pauses.

"'The surest way for a salesman to arouse and keep up the interest of the prospect is to have a genuine interest in it himself. No matter how many times he has gone over the same ground, the salesman must not let the demonstration become an old story and so recite in a half-hearted, humdrum manner. Always demonstrate as if the goods were as new and wonderful to you as they are to your listener. Make every demonstration enthusiastic and fresh. This can be done, but it will require you to be always at your best and full of genuine love for your work.'"

Mr. Patterson, with the primer and manual in hand, began to go further into the conduct of the salesmen. It was his nature to prescribe for his business and for those about him in every detail. He wanted all his salesmen and executives to be well dressed. In later years, when money was freer, he had a way of rounding up the men in the offices and sending them to New York "to get the hayseed off them." He would send men with orders to tailors for several suits of clothing; he bought travelling bags and neckties by the dozen. If a man were not shaved he would present him with a razor. Down at the Waldorf-

Astoria in New York he one day decided that the men did not dress better because they did not know how to dress; he sent for the head valet and had him supervise the preparation of a book showing what kind of clothing a man should wear upon every occasion.

He believed that everything which might be worked out and set down on paper ought to be so worked out and disposed of for all time. He had lists of his own clothing drawn up for trips of various durations and for the various seasons. His man, when packing, simply took the proper list and followed it. The dinners that he gave were also reduced to schedule; the social affairs of the N. C. R. were likewise regulated. The company decorations, the escort, the luncheon or dinner, the trips—all were put down in schedules and every man knew what he was to do or provide. Mr. Patterson could have the N. C. R. equipped for any sort of convention or reception on an hour's notice and without the slightest confusion.

As far back as 1892 I find him laying plans for publishing a book for travelling salesmen so that they would be properly equipped for their travels. In *The N. C. R.* he wrote this, which would be useful for any traveller:

It is proposed to give the travelling salesmen a memorandum book more elaborate than our "Things To Do To-day" book. Among the things which it would contain would be a list headed: "Travellers' Reminder": Have I packed my: Coat, Waistcoat, Trousers, Overcoat, Socks, Slippers, Shoes, Overshoes, Dressing-gown, Shirts, Undershirts, Nightshirts, Drawers, Suspenders, Collars, Cuffs, Neckties, Handkerchiefs, Gloves, Comb, Hairbrush, Tooth-brush, Keys, Photographs, Addresses, Circulars or Sample Books, Postage-stamps, Books, Surgical Appliances, Flask, Lunch, Agents' List, Nail-brush, Clothes-brush, Blacking-brush, Looking-glass, Razor, Sponge, Towels, Soap, Perfumery, Court-Plaster, Pins and Needles, Thread, Buttons, etc., Jewellery, Eye-glasses, Watch, Knife, Scissors, Matches, Tooth-

picks, Hat, Cane, Umbrella, Memorandum, Visiting Cards, Letters of Introduction, Pens and Pencils, Paper and Envelopes, Pistols, Medicines, Cigars, Drinking Cup, Glycerine, Guides, and Time-tables.

Any suggestion in regard to the above list would be received with thanks.

The "Things To Do To-day" books that he refers to were one of his earliest suggestions and one that he carried through to the end of his life and for every executive of the company. He started the habit back in the coal days of carrying in his vest pocket a little two-by-three-inch book in which he had his schedule for the day and in which he also jotted down every fact which he thought would be of use in the company. Later, in England, he found just the sort of red leather book that he liked and he every year not only ordered a supply for himself—for he would use two or three a month—but also one for each executive of the company.

He considered that every man should have his day planned in advance and also have some means always at hand for making notes. In his own case he had what he was to do during a day typed on a card to fit his wallet and he used the little books entirely for notes, and since he liked only soft pencils and always wrote in a large hand he could rarely get more than one note on a page. Like everything else that he did, the matter of notes was reduced to a system.

It must be remembered that Mr. Patterson was an almost uncannily skilled adapter rather than an originator; the line between adapting and originating is hard to draw for he got suggestions from quarters where no other human being would have found them and then turned them in such fashion that no one else would have recognized the suggestion.

He was never without a notebook or a pad. Beside his bed he had a reading light, a pad, and a pencil, and it was no infrequent thing for him to make twenty or thirty notes during the night. The pad was of course standardized and of a size so that the sheet would fit conveniently into his side coat pocket. In the morning he would gather up the notes and either hand them to his secretary to be transcribed and transmitted to the proper person, or, if they were long, he would dictate them himself. He preferred to write these notes with a red pencil—but not until his later life did he find a red pencil of exactly the colour and softness to suit him. He immediately ordered a dozen gross of these pencils—he wanted enough of them to last him "the rest of his life." Thereafter all his notes were in red.

Most of the ideas on which the N. C. R. was built came by way of the little red book or the memorandum pad by the bedside. Mr. Patterson once drew up a chart which he called "The Itinerary of an N. C. R. Idea" and which explains the usual route:

"1. Red book in vest pocket.

"2. Paper pad at bedside.

"3. To bulletin pedestal in house or in hotel when away from home.

"4. To pedestal in office.

"5. To Committee of 15 and others called in executive committee room.

"6. All or part of the committee to adjourn to any part of the factory.

"7. Advisory board.

"8. Meeting in schoolhouse.

"9. Advertising department for publication.

"10. General publicity department."

Benner—whose prophecies Mr. Patterson always followed—predicted a panic for 1893 and in the fall of 1892, in spite of the great business the company was doing, Mr. Patterson began to talk panic. He made a trip to Boston to see his bankers; he looked about the country a good deal and he was convinced that Benner was right. No one in Dayton took him seriously. They just said: "John Patterson is raving again." But he was convinced that he was right. He said that the whole company would have to find a way to bridge the hard times that were coming and the only way was to intensify the sales methods. He kept talking about getting better selling methods. He decided that the agents were not selling as much as they could. More particularly he thought that they were not using the primer and the other company helps, and in the spring of 1893 he decided to see for himself what the agents were doing.

That trip is memorable, for from it dates the real use of the sales methods of the N. C. R. and when the panic was over the N. C. R. was a real company. No sales force in the world has ever received the thorough overhauling that Mr. Patterson gave his people in this trip in which he visited fifty towns in fifty-one days. He was accompanied by Mr. Gibbs who says:

"This first trip that I made with Mr. Patterson was a very trying one. We had nothing whatever to guide us; we scarcely knew what we were going to do when we started out from the factory. Our programme, in fact, was made up as we went along.

"In order to expedite matters and do the greatest amount of work in the shortest possible time, we notified the agents well in advance as to the dates we would arrive in the various territories, so that they might arrange to

have the men from outlying districts come in to the main cities. This was done to economize our own time. It was just as easy to talk to twenty-five men as to talk to three or four; besides, we realized it was better for one man to get the experience of fifteen others rather than to sit in a meeting attended by only four or five.

"In every city of any importance we held a convention of the agents and examined each man on his selling methods, his style of approaching a storekeeper, his ways of closing sales, his personal appearance, his attitude toward the prospect, and we also put in considerable time inspecting the showrooms and finding out how registers were exhibited and sales made. Part of the time Mr. Patterson acted as storekeeper and the balance of the time I served in this capacity."

Few of the agents ever forgot those visits. Mr. Patterson had his fighting clothes on. He wanted the primer used. He employed his every device of sarcasm to see that it was used. And he had a great fund of sarcasm to draw on. Here is Joseph H. Crane's report of a visit:

J. H. P. (aside). "You are in your office. I am a druggist. My place of business is four blocks up the street. I am coming into your office, and I want you to explain the machine to me."

J. H. P. "Good morning, Mr. Rennie. My name is Mr. Patterson. I have a drug store. I want to look at your registers."

R. "I want to explain this machine to you. This register is placed in the most conspicuous part of your store."

J. H. P. "It is not. You have spoken one sentence and made two mis-statements. You have said it is placed in my store. It isn't, it is in your office."

THE FIRST AGENTS' TRAINING CLASS

Established by John H. Patterson in April, 1894, in a little cottage near the N. C. R. Factory

MR. PATTERSON'S FIRST WORKERS

Fifty men were employed by him in the first period of his experiment as a manufacturer. To-day there are 7,000 employees at the Dayton factory, and 10,000 in all employed by the N. C. R. Co.

R. "Well, I meant it would be."

J. H. P. "I don't know what you mean, I only know what you said. If I buy that machine I am not going to hang it from the ceiling; that is the most conspicuous part of my store."

Every agent who did not know the primer regretted, after Mr. Patterson's visit, that he had been born. In Rochester, impersonating a druggist, the agent took him into the partitioned room and started the demonstration with:

"Mr. Patterson, when you sell something, this tablet jumps up and tells you what you bought."

Mr. Patterson waited for no more. He came running out of the booth, yelling: "Help! Help!" at the top of his voice. The agent rushed up to him.

"Are you ill, Mr. Patterson?"

"No, I'm all right, but you scared the life out of the druggist. He thought he was locked up with a crazy man—telling him about a tablet jumping up and talking."

He told that agent he would be back to examine him on the primer in sixty days. In Brooklyn he found an agent who did know the primer. He knew every word of it, but he stood off and declaimed it at the top of his voice. Mr. Patterson sent him back to the factory to learn how to say it. In a demonstration booth in Philadelphia the agent had hung a beautiful calendar. One of the rules of the company was that nothing but the register should be in the room. The agent went through with his talk in good shape but as he came to critical points—points of great emphasis—Mr. Patterson would make some innocent remark like, "My, what a beautiful gown," or "My, that's a nice calendar." When the agent came to the point where he handed over the order blank for signature,

Mr. Patterson got out his own notebook and, walking close to the calendar, took careful note of the lithographer's name!

A most particular part of the demonstration was the use of real money; the agent was expected to have exactly $7.16, which was the amount that would make the change for each demonstration. The company provided a special pocketbook to carry just this amount in the exact denominations. In Newark, the agent said:

"I'll tell you right now, Mr. Patterson, I don't use the primer. Selling is all personality. The primer is all right for Joe Crane but I've been selling too long to change my methods. I'm not a parrot."

"Fine," answered Mr. Patterson. "I am glad to hear that you have a better method. That is what we are always looking for—something better."

The agent went through his demonstration rather crudely and he did not use cash. When it was all over, Mr. Patterson asked:

"That is certainly fine. You have a fine method. There is just one thing I want to know: where do you put the money in this thing?"

CHAPTER IX

BRIDGING THE PANIC OF 1893

NO SALES force, no organization of any kind has ever been put through such a course of sprouts as followed John H. Patterson's tour of the N. C. R. agencies in 1893 and his observations at the company's exhibit at the World's Fair in Chicago. He was determined to beat the panic which he saw on the way. Nothing put John Patterson into so fine a fettle as a hard job ahead. If there was nothing really to do, he usually stirred up petty things but when a big job was on, he was action every minute.

Cash-register salesmen have for many years had the reputation of being uncannily resourceful and tireless; they were not always that way, nor did they grow that way. It was Mr. Patterson who made them so—and he started the making after this very trip. For the first time he really saw what the agents were doing—he had never before inspected the front-line trenches. He had stayed at headquarters. But after that trip no executive of the company was ever permitted long to remain at headquarters; they were supposed to be out on the road holding conventions of salesmen and finding out why registers were being sold or why they were not being sold.

Mr. Patterson was the originator of what might be called "intensive supervision"; he held that to be a necessary part of intensive selling. Churches find it necessary

to hold "missions" or "revival" meetings every so often. That is exactly the idea Mr. Patterson took into the management of the sales force. He called them in for conventions and he went out and held conventions among them. After this trip no N. C. R. salesman ever went stale through lack of encouragement. Someone was always around to shake his hand for doing good work—or to shake him up for not doing good work.

On this trip and after it Mr. Patterson used his every art to put the selling force on its toes—one moment he would be praising extravagantly—and he could praise without limit; the next moment he would be bringing into play all of the biting sarcasm for which he was famous. The comments he made on this trip are useful to any one, for the conditions he found were not simply N. C. R. conditions—they were human conditions; it was ordinary, passive human nature which Mr. Patterson saw, and he started in to make extraordinary, active human nature out of it. Which is only another way of saying that he started in to exert the full power of leadership. Here are some of the comments:

"I have been surprised to find how many salesmen and sales agents were sick just the day I happened to be there. It was the most singular occurrence that they should have been sick the night before or had been up until 12:00 or 1:00 o'clock, trying to sell machines and that that was the only morning they had been late for weeks past. Now this agent said the reason he lived in a neighbouring city, an hour's ride from his territory, was that he had some friends in that city that he wanted to meet in the evening. This agent was the worst of all.

"I had examined and ascertained that his territory consisted of a population of 200,000. He had his office

run by an assistant at $75.00 per month. We cut down his territory one half, and placed him on trial for the next few weeks. He had no system of selling; admitted that the primer was a good thing, but he was too lazy to learn it. He never spent any time in his territory in the evening.

"We told him that he was a back number. He had not time to shave every day; he could not afford to wear clean linen every day; he had no money to buy a safety razor outfit; his beard looked like a music box cylinder, but he was spending $2.00 a day for cigars. After we had proven these things to him, he still argued that he was right.

"In one of our most prominent offices the office salesman took us into a room to demonstrate a machine; and, when he came to the distribution of supplies, he found he had no 'Paid Out' slips. He censured the office boy, and said:

"'I suppose you think it is queer that the proper stationery is not in the drawer of this register, but I have instructed this boy always to keep it well supplied.'

"I have found nothing but excuses on this trip—excuses for not learning the primer, excuses for not committing the Book of Arguments, excuses for not giving guaranteed territory, excuses for not decorating the show windows and offices, excuses for not keeping the wagons in good shape, excuses for not having the men come to the office early in the morning, excuses for not sending out advertising matter, excuses for smoking in the offices, excuses for not getting orders, excuses for the state of the weather, excuses if it is too hot, excuses if it is too dry; nothing but excuses. It seems to me that some of the sales agents are continually trying to find excuses for

their work, instead of using their energies to increase the business. It is remarkable what astonishing excuses a sales agent can get up for not attending to his work. If there were less excuses and more hustling, our factory would have to run overtime.

"A user of our machines called my attention, on this trip, to the fact that one of our agents looked more like a sporting man than a man capable of selling cash registers. I asked him what made him look so and he said it was the white scarf and large diamond pin in his shirt-front.

"I find, upon examination, that the sales agents and salesmen are greatly hindered in their results from their bad habits. I mean too much smoking, too much drinking, and lack of every-day bathing. We cannot afford to have the territories occupied by sick men. The health of the salesmen we have met has not been first-class, and they could not do the work expected of them. Some think it is necessary to take about five drinks of whiskey every day. I know that to stop smoking is a very hard thing to do, but to will to stop it is not sufficient. Two or three days of rest, hot baths, and drinking hot water, are absolutely necessary, and will make the body both physically and mentally strong. I find the salesmen are not neat in their appearance. They shave only two or three times a week when they should shave every day. Their collars and cuffs are worn more than once, their shoes not blackened, and their shirt fronts are stained with tobacco.

"If I was ever convinced of one thing in my life, I am convinced that a cash-register office must be on the most prominent street of a town, and on the most prominent side of that street. Agents who have ground-floor offices

in prominent parts of the town are reaping great results. Many agents object to taking these ground-floor offices on account of the rents being so high that they think they cannot afford it, when the facts show that they would sell machines enough to pay the rent over and over again. With the window displays that we have, the illuminated pictures, registers operated by electricity, together with the many other new devices which we are getting out, to have an office on the ground floor on the most prominent street is the best-paying investment that an agent can make. Do not hide your office on a side street or upstairs where no one can get at it. Have it where it will be easy to get at; fix up good window displays that will attract attention; have competent men to show machines to those who come in, and you will sell more machines in your office than you have ever before, and not only make your rent, but a handsome profit besides.

"Light and cleanliness are the two great essentials to selling. A dark store is never as profitable as a light one. People are attracted by light. Many a store can be made light by knocking a few more holes in the wall. No one has yet failed in business because he spent too much money in lighting his store. There never was a man free to do as he pleased. You've got to do as others want you, or do no business. The most effective way to dress a window is to arrange a line of goods designed after one special class. This is better than resorting to too many varied effects. Everybody knows that profit is the difference between expenses and receipts, and yet fully one half of the business men make more effort to cut down expenses than to increase their receipts."

He forgot nothing:

"Some of the agents claimed that our criticism of them,

on our trip, was rather severe. In order to prove whether their judgment was right in this matter, we engaged an elocutionist for one day, who knew nothing about cash registers, to sit in the office while the salesmen were explaining the register, and then tell all of us his opinion of each one. After a prominent sales agent had talked for two hours and a half, explaining the register, using every argument that he could, the elocutionist pointed to the register and said, 'What good is it?'

"The above shows that our criticism was just; and that if a stranger after listening to a sales agent for two hours and a half would ask what the register was good for, surely our criticisms were well taken."

Most of the criticism was constructive—if there was any human material out of which anything could be made. Mr. Patterson sought to build up something new out of what he had torn down. For instance:

"Very few agents appreciate the importance of saying the proper things while they are walking or driving with a P. P. from his store to the salesroom or hotel room. Do not talk about trifling subjects; do not talk about the weather; do not talk about the silver question, for, if you do, it will remind the P. P. that times are hard; do not talk about baseball games or prizefights; talk about the business on hand. Tell him about our registers at the World's Fair; point out some of the stores, as you go along, where our registers are in use; talk to him so as to prepare his mind for the demonstration, also to interest him in the cash-register system. Do not give him time to think about his store, as he may worry about leaving it, thinking his clerks will not take care of things.

"Explain to the storekeeper that the cost of the register is not high; mention the new improvements that we have

put on the machine—the new resetting-to-zero device, the hangers, the combination indicators, and the black band across the adding wheels; say that each one of these improvements is worth a great deal of money, but that we have not increased the price of the register on this account; explain how much easier it is to read the amounts shown on the adding wheels, and how much quicker it can be done; show the advantages of the combination indicators; explain what the hangers are for; show how much easier it is to reset the adding wheels to 'zero'; explain that, if the old register was worth $200, the new one with all the improvements is worth $100 more.

"Nearly all salesmen, in arguing on the price of the register, said that it would save a storekeeper ten cents a day, and offered this as a great inducement to purchase a machine. One salesman said: 'It will save you the cost of a good cigar every day.'

"Now, such talk is utter rot. No storekeeper cares about a saving of ten cents a day on an investment of $200. Besides, the ten cents in itself is such a trifling sum that it is folly to suppose any one will be influenced by such a slight inducement.

"Use the argument that a register will save from $3 to $5 a day. That will be of interest to a merchant.

"Some salesmen use arguments as weak as themselves. A ten-cent salesman cannot sell cash registers."

He was particularly keen to see that the advertising matter of the company was not wasted. The poorer salesmen—the men who sold in fits and starts—had small regard for advertising.

"I asked one sales agent what amount he was expending each month for postage, and, after much pulling, I brought out the fact that he was expending the enormous

amount of $2.14 per month. As it took about $2 per month for postage to the factory, the extra fourteen cents must have been for advertising matter, and this is in a city of over 130,000 inhabitants—a prosperous city, a clean city, a city full of business stores, a city of hustlers. And yet this agent complained to me that business was dull, and that it was almost impossible to secure orders. A man like that might make a good clerk in a dry-goods store but is a pretty poor cash-register salesman.

"At one agent's office I noticed a large pile of advertising matter in the windows—'Stop the Leaks,' 'My Little Story,' 'Six Years' Experience,' etc.—about 500 copies in all. When I inquired the reason for doing this he said: 'You have no idea of the attention that advertising matter attracts. Why, one day we had as many as twenty children in here for copies. We have had requests from children daily.'

"I told him that distribution of this kind was equal to throwing the books in the river. This office looked like a book store. In fact, the sales agent himself said that it was often taken for one. We do not want our offices to look like anything but cash-register offices, to attract business men, not children. When a sales agent prides himself on the fact that his office looks like a stationery store it is high time to change his show windows and to call his attention to the fact that window dressing was discussed at the last convention, and that he failed to give it any attention.

"I asked one sales agent to show me his P. P. list for a city of over 150,000 inhabitants. He said his city salesman had it. (Think of but one salesman for 150,000 people!) When the salesman came in, I asked him for the list. He was somewhat afraid to produce it, or else

was ashamed. Out it came, however, a little blank book, containing about ninety or so names, some of them wholly illegible, all of them carelessly written, and many without initials or street numbers. Thinking that there was a mistake, and that it was not possible that that was the only list the sales agent had, I turned to him and asked if that was all.

"'Yes,' he replied, 'that's all.'

"'And have you no copy of it?'

"'No,' he answered, 'that is the only list.'

"Ninety names out of 150,000—a little drop in the bucket. One salesman in a great big city plodding along with a little list of ninety names It was sickening. It was disheartening. Here we are pushing, driving, hustling, hammering, making suggestions, paying out money, doing everything to help the business, and I find things like this at almost every step. Is it any wonder that we were short of orders the past three months? Is it any wonder that the business doesn't grow as it should grow? What are such agents as the above doing to make it grow? Now such things must not exist. We cannot afford to see our business suffer in this way."

The Chicago World's Fair was the first big exposition in which the N. C. R. exhibited. A small exhibition had been placed previously in London but nothing on a big scale had been tried. Mr. Patterson himself convinced the Fair Board that every concession on the celebrated Midway should instal a cash register and made arrangements for selling them. These concessions were on the commission basis and it was not hard for Mr. Patterson to convince the Board that if the concessionaires were allowed to do their own accounting the Fair management would receive what stuck to the rungs of the ladder.

So they made it a part of every concession that a cash register be used. This of itself was a great advertisement and Mr. Patterson made the most of it; he showed pictures of Esquimaux, of South Sea Islanders, of the inhabitants of every clime and nation ringing up on cash registers. It was not the sort of advertising to sell registers but it was the sort to make every human being in the country know what a cash register was—and at that time only a few people did know the cash register.

The exhibit itself was in charge of R. T. Houk, now vice-president of the Mead Paper Company. "Doc" Houk had more than his share of trouble, for every time John Patterson visited the exhibit he tore it to pieces. He visited it often, wandering around in the crowd to hear what the visitors had to say and then turning to advantage what he found.

"We noticed that the people were not paying any attention to our registers that were being operated by power. We had signs, 'See It Add,' printed in large letters and placed over these. We also posted on the guard a small slip with the words, 'Cents Add Here,' and in another place a slip with the words, 'Dollars Add Here.' This drew large crowds.

"We mentioned this in *The N. C. R.*, and presumed that every office would take the hint and do likewise. Not long since I was in an office on the principal street of a city where many were passing, but none stopped. I put these signs in the window, and in a few minutes a crowd had collected."

Not all of the signs lasted, however. A favourite one was: "Come in and See the Detail Adder." A man and a woman were passing an agency window holding this sign.

"Let's go in and see the thing," suggested the man.

"No!" cried the woman. "Come, hurry away. I hate snakes!"

That was the last of the sign!

The exhibition was attended by about a dozen clerks—they were not salesmen but were expected to tell visitors what the machines did. Mr. Patterson did not at the beginning permit himself to be known to these clerks. He used to wander in as a stranger and have the registers explained to him. He got some marvellous explanations. At once he made up a list of things a stranger ought to know about the registers and the probable questions they would ask. These he printed into a booklet and started a school for the exhibitors; instead of each man exhibiting according to his heart's desire he had to repeat an exact speech which quickly told all the more important facts about the registers and what they would do.

Out of all this field experimenting came the firm conviction that every salesman had to learn the primer or get out. Not otherwise did Mr. Patterson see how the business would be forced through the Panic. He drew up "Five Things a Salesman Must Do." He dropped suggestions; he ordered—for he felt that he was in the face of the enemy. This is what he ordered:

"THERE ARE FIVE THINGS we insist upon every sales agent doing. They are the foundation principles of success, and it is absolutely necessary that they be adopted at once. Don't deceive yourself by thinking you can get along without them. You cannot.

"No. 1—GIVE GUARANTEED TERRITORY

"Every salesman must be given a certain territory and receive credit for all orders from that territory, whether taken by him or at the salesrooms.

"No. 2—USE THE PRIMER

"By this we mean, commit the 'Primer,' word for word, and have every one of the Salesmen and office men do so. Not commit it partly, but commit it so as to be able to repeat it exactly as it is printed.

"No. 3—USE BOOK OF ARGUMENTS

"Have everyone familiarize himself with the arguments in the book, 'Arguments on the Price,' so as to be able to repeat them.

"No. 4—DECORATE WINDOWS AND OFFICES

"Use the illuminated pictures, the registers operating by electricity, and other novel devices to attract passers-by.

"No. 5—HUSTLE

"Have your men start out early; send out advertising matter; keep a good P. P. list; mail circular letters, and above all, take advantage of the many suggestions published in *The N. C. R.*"

Mr. Patterson would not brook further opposition to the 'Primer.'

"Complaint is made that a great many of our salesmen could not repeat the 'Primer' in a natural way. It is claimed that the language is not suitable to their style; that it is away above what they would be accustomed to say; that it is accurate, while they are accustomed to be inaccurate in everything they say; and when they speak accurately it does not seem natural. Hence, the 'Primer' is a bad thing for them to commit to memory and practice.

"If a man is as ignorant as that, the sooner we get rid of

him the better. It is better for him to speak accurately than to make the mistakes made by nearly all salesmen whom we have heretofore examined.

"We will accept no excuse for a man not being able to learn the 'Primer.' If he hasn't the intelligence, we do not want him as a salesman.

"Nearly all of the sales agents and salesmen we examined said: 'We treat each man differently. We size a man up and give him the kind of talk we think is best.' This is foolish talk. How would it do for a good actor like Booth, every time he plays Hamlet, to play it in a different way? One storekeeper is the same as another. Each one is in business to make money; and, if you can prove it to him that he can make more money by our system than by his own, you have gone a long way toward securing an order.

"The one way to convince a man that our system is better than his is by the 'Primer' and the 'Book of Arguments,' supplementing them by any other arguments at your command. Do not treat each man differently; treat all alike, and use the 'Primer' in the demonstration of the register."

But in this and in every other part of the selling he insisted that the salesman put himself in the place of the prospect.

"Do not attempt to talk to a man who is not listening, who is writing a letter or occupying himself in any other way while you are talking. That's useless, and is a loss of self-respect and of his respect. If he cannot give you his attention, say to him: 'I see that you are busy. If you can give me your attention for a few minutes I shall be pleased; but I don't want to interrupt you, if you cannot spare the time, and I will call again.'

"Put yourself in his place from the very start. Make him feel, not that you are trying to force your business upon him but that you want to discuss how his business may be benefited by you."

The panic broke: the business of the country dropped to nothing. Not so the N. C. R. business—the agents sold on the ground that merchants had so few dollars that they had better take care of every one of them! The year 1892 had been a good one—the company had shipped 15,003 registers as against 11,956 in the previous year. In 1893—the year of "no business"—the company sold the record number of 15,487! That is what intensive selling did.

At the close of the year Mr. Patterson, reviewing events, said:

"The year of 1893 has been unparalleled in the history of the United States. Great questions were to be solved, every industry was stagnant, and it was a time when it behooved all large corporations to carefully watch and wait. Some closed down, some lost courage, while a few pushed ahead and worked harder than ever with confidence in the future. We belonged to the very few that did not give up, made extra efforts to succeed, and we are now in excellent condition for 1894.

"We did not let the hard times interfere with our work. When times got duller, we advertised the more and worked the harder. When the panic struck the country we were somewhat undecided as to what best to do, but we determined to strain every nerve to force the business, and have, since that time, strengthened our organization at every weak point, both at the factory and on the outside. Future prospects now show that we were justified in keeping our immense force busy, especially on experimental

I—THE DEVELOPMENT OF THE N. C. R. PLANT

Upper: Its factory space in 1884, 1886, and 1887. Lower: The first N. C. R. factory, in 1888, on the present location

II—THE DEVELOPMENT OF THE N. C. R. PLANT

Upper: Another view of Building No. 1, completed in sixty days in 1888. The split post referred to in the text is in the foreground. Lower: The N. C. R. plant in 1890, a wing having been added to the first building of 1888

and tool work, and on new registers for England and Germany. There are very few manufacturing concerns that have kept their force of employees so busily engaged as our men at the factory, and we all feel grateful to our sales agents and salesmen for the orders received during these dull times."

CHAPTER X

THE BEGINNINGS OF SCIENTIFIC SELLING

THE spirit which made Mr. Patterson a great man cannot be better expressed than in the words he once used to a convention when critical times seemed to be ahead. He said:

"If there ever comes a time in this business when courage will not be necessary, when it will not be necessary for us to fight against obstacles, I shall know it is time to put up the shutters, turn off the power, and draw the fires for all time."

This one paragraph means a great deal. It means that the very thought of ease was cast out of Mr. Patterson's life and therefore out of the life of the N. C. R.—for the N. C. R. was his life multiplied. It meant that there could be no cinch jobs anywhere in the company. It meant that there could be no chair-warming salesmen. It meant that "hard to sell" was not an excuse—for a man who did not expect to find it hard to sell cash registers was not expected to come with the company. Mr. Patterson would not bother with any one who was afraid to go upstream.

This thought dominated Mr. Patterson's life, and now, with the experience of having not merely weathered but actually turned to advantage the Panic of 1893 and having seen what trained salesmanship could do, he decided that as far as his company was concerned all salesmen would be trained. He dismissed utterly the then-prevailing theory

that salesmen were born, not made. I think he is the first man who consciously started in to make salesmen. He said:

"It has always been stated that cash-register salesmen were born, not made. This is a big bubble that most of the sales agents have helped to blow, but we have pricked it and it has collapsed. I find that cash-register salesmen are made. I would rather take a new man and train him into the business than to take an experienced cash-register man and try to teach him new things. The green man would make the better salesman. Many of the sales agents, who have been in the business for a long time, will not accept any new points from us. They think we know nothing about selling cash registers, and they get angry with us for suggestions which we may make. Such men can never hope to make much money. It is the men who are willing to accept information and profit by it that will get ahead in this world; therefore, I think that better salesmen can be made of new, green men, who are willing and energetic, than can be made of men who have had some experience in this business."

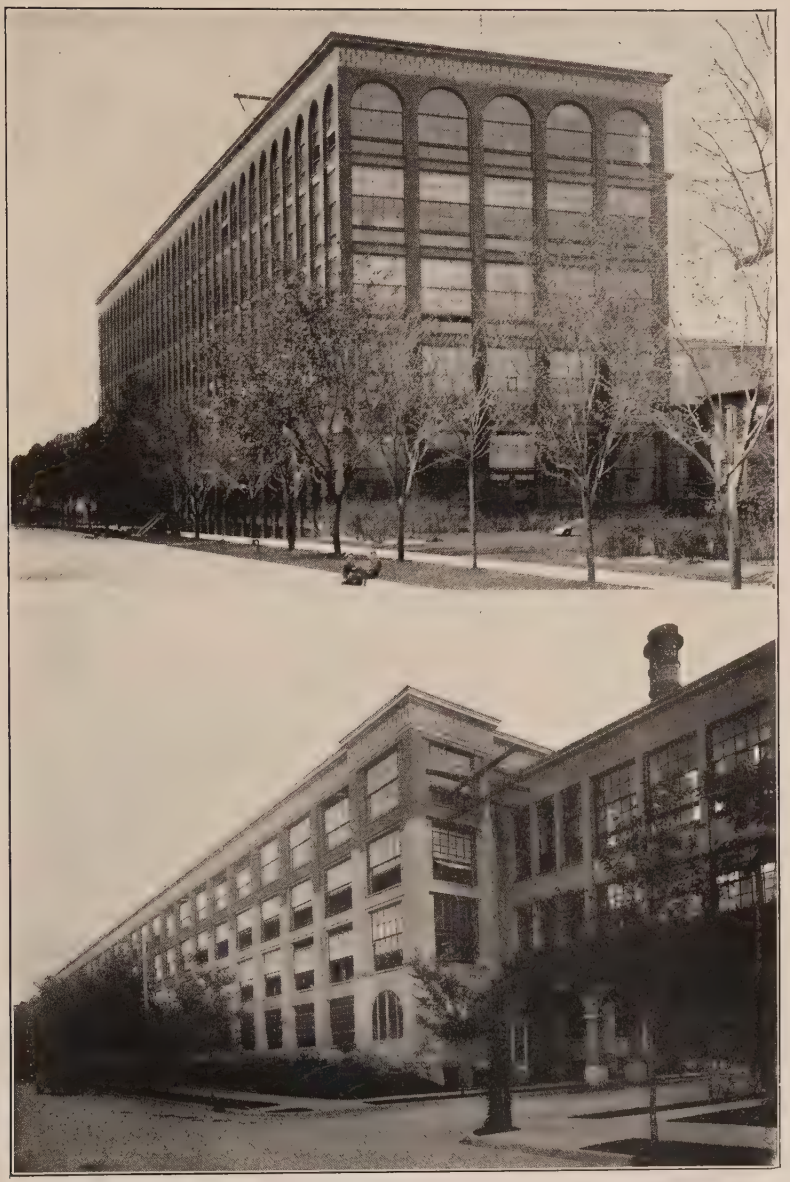
He had already, as was outlined in the last chapter, set down five things that a salesman *must* do as opposed to suggesting what a salesman *might* do, and it was during this period that the significance of the number "five" began to grow upon him. You will find, going through the affairs and the literature of the Cash Register Company, that practically all subjects are separated into five divisions. Five was to Mr. Patterson what seven was to the ancients. The pyramid charts, which later became one of the distinguishing marks of the company, were nearly always in five columns. No one quite knows how Mr. Patterson happened to settle on this number, but

probably it grew out of his habit of demonstrating his points by using the fingers of one hand. Then he reflected that there were five senses, five kinds of money—gold, silver, copper, nickel, and paper; that a customer in a store did one of five things—buy for cash, buy on credit, pay on account, collect a bill, or change money. You will find the number "five" woven into the fabric of the N. C. R.

Having decided that all salesmen must be trained, the natural step was to establish a school for their training. Mr. Patterson thought in terms of schools. The world to him was a school. His conventions had developed into seminars. He said:

"If the agents can sell registers by their present methods, they can sell twice as many if properly trained."

So on April 4, 1894, he opened the first agents' training school in a little cottage on the lawn of the old Patterson homestead. This is the "cottage under the elm tree" and it marks another new idea brought by Mr. Patterson into American business. The school was begun, not primarily to train new agents, but to train the agents already selling. He announced that every man selling for the N. C. R. must go through this school; and in two years every man did go through. The company paid the transportation and hotel bills of the students and allowed them three dollars a week for pocket money. The first class of thirty-seven students was partly drawn from those who had been in attendance at the company's exhibit at the World's Fair. Of the thirty-seven, nine took a two-weeks' course. These were N. C. R. salesmen brought in for this period of time. Eight dropped after two or three days. Three came in near the end of the course and were transferred to class two. This left



III—THE DEVELOPMENT OF THE N. C. R. PLANT

Upper: The first daylight factory erected in America by "J. H. P." at Dayton.
Lower: The 1888-90 building after remodelling and enlargement

IV—THE DEVELOPMENT OF THE N. C. R. PLANT

An airplane view of the factory as it looks to-day

seventeen new men to the business graduating in the first class. Five of the pupils in that first school—W. H. Ashton, C. H. Turner, L. E. Wilson, Z. H. Lassater, and D. J. Moran, afterward became sales agents. One of the sales agents describes the school thus:

"I shall never forget the first salesmen's school I attended. It was held in a little cottage under the big elm tree. Mr. Joseph H. Crane was the teacher. He had many other duties; among others, he was sales manager, so he was not in the schoolroom much. However, on examination day he was always sure to be on hand.

"We had a primer of about four hundred and fifty words, which it was necessary to be able to say word for word. You were not considered bright enough to become an N. C. R. man if you could not recite it well. On the other hand, it was not well to be too bright. A happy medium was the proper thing. Then you might make good.

"The great worry was: could you get through your examination and get your diploma? If you did get it, you thought yourself about 'it.' However, your first few weeks in the territory determined how much you amounted to, and in that short space of time you found yourself not very much—you realized your real worth."

The school brought many changes. Those salesmen who would not take the four- or five-weeks' course dropped out of the company. Mr. Patterson did not bother about this. He had decided on his policy and he stuck to it, and, in addition, the company was getting applications from all over the country for permission to enter the school. Although we have some splendid N. C. R. salesmen from the early days, such as F. S. High, John T.

Watson, H. B. Whitehouse, and J. J. Range. Every one of these men was among those who grasped the importance of the new move and fell right in with it. The others dropped out. Mr. Watson told me that adopting these methods immediately more than doubled his personal sales. But not all the men could see this. The natural-born salesman went out of the N. C. R. with the coming of the training school.

Study also brought about changes in the primer. Mr. Joseph H. Crane's name had been on it and he felt, and Mr. Patterson felt, that it ought to be a company product. The company started to change the primer, and the salesmen immediately objected that no sooner had they learned it than it was changed. Then Mr. Patterson, who never had the slightest confidence in the writing ability of any one connected with the company—no matter how excellent that ability frequently was—took the primer to Boston under what must be called a delusion that the fountain head of the language was there. He hired a college professor and had the primer done into the simplest and most direct forms of language. Mr. Patterson always objected to the Latin derivatives. He wanted Anglo-Saxon words, and his test of good writing was the ability of an utterly uneducated man to understand what was written. The word-slinger never found a berth in the N. C. R., nor did the pedant.

The school taught the primer. It taught the demonstration of all the machines the company then made. It taught price lists, store systems, the manual, the getting of prospects, and the mechanism of the machine. It did not teach the students how to repair machines. Mr. Patterson was insistent that an agent should not know how to act as a repair man and even went so far as to

prohibit agents from carrying screw-drivers. For, he pointed out, a mechanically inclined agent with a screw-driver will spend so much time tinkering with machines that he will forget to sell them. He shortly established a school for repair men, in which the students spent part of their time working in the factory and part in the lecture room.

The first agents' training school proved to be too big, and in about a year classes were limited to fifteen men. The expense of bringing so many men to Dayton proved rather a serious burden, particularly as quite a number of the men later on came merely for the trip. So in a short while the training schools began to be held all over the country. It was cheaper to send teachers out than to bring pupils in. In the beginning any man who wanted to attend school was put through the course and given a chance to sell, but shortly it was discovered that many men were attending in order to gain training in selling and not because they wanted to become N. C. R. salesmen. Mr. Patterson would have been perfectly willing to train any man who wanted training, but the company simply could not afford to do it. So they made it a condition of entry that a man should have spent at least six months trying to sell cash registers. It was considered that any man who would stick through six months of selling was worth spending some money on. Mr. Patterson once worked out with me the foundation and the progress of the school. This is essentially what he said:

"That school was elementary as compared with the present day but its methods were the same as are used to-day—that is, the bulk of the teaching was through the eye. There was nothing abstract about the school. When explaining the functions of a register, a machine was

always before the class. When making a demonstration or an installation, the fittings were true to life; we had all the stage settings. If the event were supposed to take place in a grocery store, we had a store fitted up with real groceries in it—we now have dozens of completely equipped little stores in our main building.

"We do not to-day depend upon memory in the abstract but only through association of ideas; that makes the man more natural in his bearing and sales talk than if he tried to think of the arguments without having the actual thing before him. In fact, we have to-day abandoned memorizing; we would prefer that the man use his own words whenever he can, provided those words are simple and to the point. We made a test on this matter of memorizing. During five and a half years 26 per cent. of 588 men hired made good with memorized sales talks; of 586 men who were instructed not to memorize but to put in their own personalities, 78 per cent. made records that entitled them to continue with us. That decided us against memorizing.

"We teach all that we can about every business we can so that any agent can at once grasp the reasons why a particular merchant should have a register. We teach him under five general heads: General Instruction, Objections and Answers, Selling Points, Closing Arguments, and Miscellaneous. We give him a thorough knowledge of the mechanism and the building of a register by having him instructed in the factory from the raw material to the finished product, and in addition to all this we have him call on and talk with users of the machines in the Dayton stores and also in the large department stores of the big cities. He is taught not only the strength of our system but also the weaknesses of

other systems. We teach this almost entirely through the eye as well as through the ear, and we use as supplements to the talks not only the actual scenes in our model shops but also through lantern slides, motion pictures, and diagrams.

"Part of the training of the salesman involves the stressing of good habits, of neatness in dress, in planning of work and of routes, and of knowing how best to use the sales literature which is regularly sent to him. This attention to detail does not tend to kill individuality; on the contrary, it makes certain that whatever is in the man will be turned into the direction of greatest efficiency. Proper schooling of any kind stimulates a man; it is only the improper that surrounds him with and binds him into a rigid formalism.

"This training does not make salesmen; no training can do that. There has to be the something to work with, and getting the man with that something is a hard task. I know of no method that will determine in advance that a man is going to make good. We have among our best men almost every known type. Our only gauge of a man is his record. If he sells he is good and if he does not he is a failure.

"We tried for many years taking salesmen from other lines, putting them through our course, and then starting them out. But the percentage of failures was so high and the process was so expensive that we stopped it almost entirely, and to-day we try to take men from out of the organization. We offer courses in the N. C. R. City Club to employees who wish to learn salesmanship and they thus have the opportunity to gain at least a trial for themselves. We consider every man in the company a potential salesman. For instance, until the war be-

gan, we employed only male clerks and stenographers in the sales department because thus these men could absorb the atmosphere of the company and qualify for road positions. Our present sales manager started in the department as a stenographer. It is likewise throughout the sales office and agencies in the field. All of the men there employed have the opportunity to be tried as salespeople and to have a look in for the bigger money."

That the idea of a training school is a good one needs no argument. The record of the N. C. R. shows that, and it is also shown by the fact that every first-class sales company now maintains selling schools. The agents working under the Patterson methods began to make money—to make more money than agents had ever made before in any line—and that brought up a new and curious difficulty. The company had been paying a very liberal commission. It was then the general notion among business men, for this was the age of pettiness in business, that tradition and not performance should control compensation. If a workman earned beyond a certain amount, he was supposed to be earning more than was good for him. If a salesman earned beyond a certain amount, his employer began to fear that he might fall into ways of extravagance. The employers of that day were most solicitous of the welfare of those they employed. They were very careful to prevent the vices of extravagance among the common people by seeing that the common people did not get too much money for their work. But by no means all of these employers were the psalm-singing old hypocrites that a survey of their actions would lead one to believe. It was just that most of them held dollars so close to their eyes that they could not even see their own interests beyond them.

The N. C. R. agents thought that if they made too much money Mr. Patterson would immediately cut their commissions. They could not understand any other course, and there was no reason why they should understand any other course. It was one of Mr. Patterson's hardest tasks at this time to convince the sales force that the N. C. R. interest was in having the largest possible number of cash registers sold and that the company could not make any money unless the agents did. As John Crawford, then the New York agent, said to a salesman who had laid off after making what he thought was as much as the company would pay him for a week's work:

"You're a fool. If you can sell a million dollars in a week, we'll hire a brass band to take your commission to you. We can't make any money unless you do."

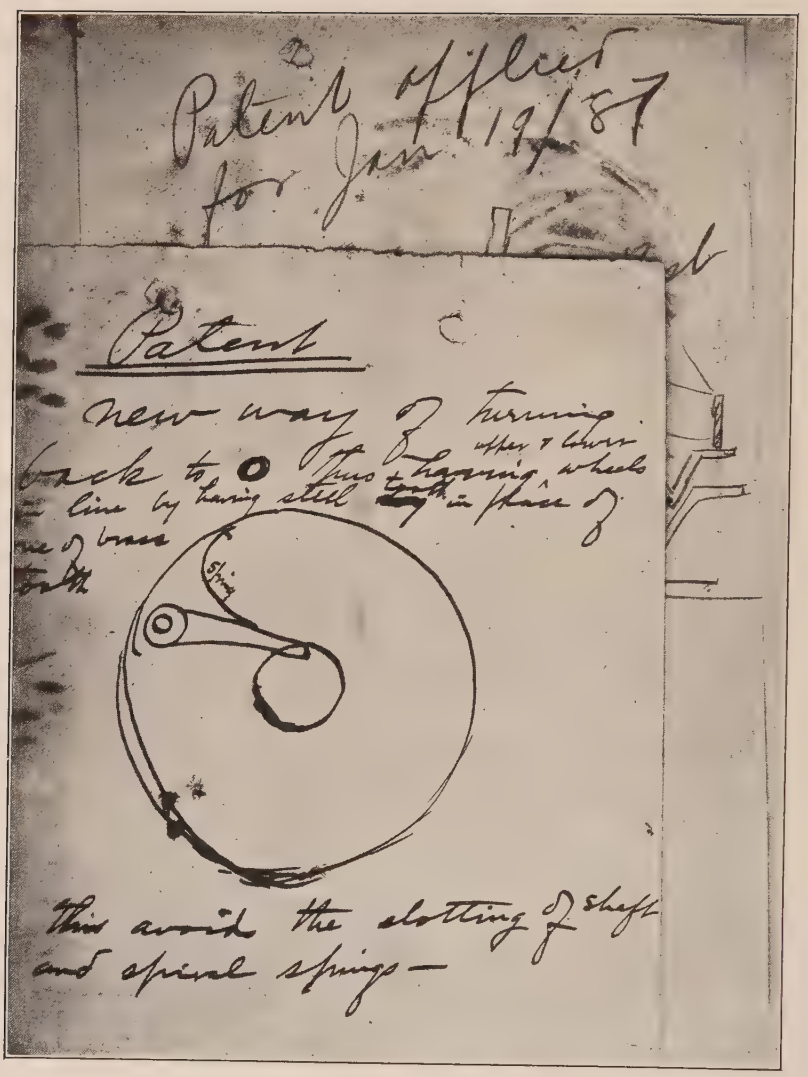
Mr. Patterson's actions in refusing to cut commissions were severely condemned by many men in business. It was said that he was putting false ideas into agents. He cheerfully went on with that practice and thought up a great number of other things for which he might be condemned. For instance, he always published the lists of purchasers. He spent a lot of money getting these lists before the public, whereas at that time lists of customers were supposed to be valued trade secrets. He refused absolutely to subscribe to the notion that a market could be saturated. It was then the general custom to devote quite as much time to seeing that too much was not sold as to seeing that enough was sold. After the record year of 1893 the wise heads of the country were talking about the sale of cash registers having reached the saturation point and that if the company were not careful it would soon find itself without any one else to sell to. Mr. Patterson never even really found out what these people

were talking about. He had a vivid imagination but it would never carry him so far as to visualize how the country would look if it did not need cash registers. He had early conceived that a cash register was required for every four hundred people in the United States. At first he used to publish the number of cash registers sold by the salesmen. This seemed unfair when the territories were compared. For instance, Crane & Co. had 12 per cent. in point of population of the United States. And so he began to give the records not in terms of gross sales but in percentages according to the population of the sales districts. As more registers were added to the line and the prices increased in range, the number of registers sold did not indicate the number of dollars' worth of business done, so results were announced in points—a point being twenty-five dollars. All registers were priced in multiples of twenty-five dollars.

From this grew the famous quota system, which did not formally come into use until 1900. The number of registers to be sold in a district was still roughly calculated as one for each four hundred of population, but this was an arbitrary figure, and the number of registers sold became, with the improvements in the types of registers, less important than the dollar value of the register, and so districts began to be calculated in points. These quotas were finally worked out on the basis of what had been done in previous years, and thus Mr. Patterson broke entirely with the saturation theory. He said that if a man could sell fifty points in a district in one year he could sell at least fifty in that district in every succeeding year. That is the basis on which the quotas have since been arranged, and the remarkable fact is that while many, indeed most, N. C. R. quotas have been raised, not one of them has ever

SOME OF JOHN H. PATTERSON'S PATENTS ON THE CASH REGISTER

"He had it firmly fixed in his mind that the product must ever be improved, and gradually this became an integral part of the business." As early as 1888 he put the Experimental Department of the N. C. R. Co. in charge of Mr. I. D. Boyer, a scientific and practical draftsman, with two expert experimenters and model makers whose duties were to mature and materialize Mr. Boyer's ideas.



A ROUGH DRAWING OF A PATENT BY "J. H. P."

Between 1884 and 1888, he took out twelve patents in his own name, and all through his memorandum books of this period are found sketches of new ideas, some of which developed into patents.

been lowered. Out of the quotas and the points grew the famous "Hundred Point Club," of which more later.

Mr. Patterson was insistent that salesmen should have exclusive territory, that a quota be set for each territory, and that men who could not realize their quota should get out. He said:

"I want to show to everybody that it is to the interest of the sales agents to divide up and give guaranteed territory. For instance, you cut it into five districts in a city or state. Here is one that is not occupied. Now, I claim that as long as this territory is unoccupied, a man in another territory has no business to get over into this unoccupied territory and sell a register, if he knows that he can sell one. You may say that if that territory is lying idle and if a salesman from another territory knows that he can sell a register there, why not let him go over and sell in that territory? I say you have a rule; you have a system, and I claim that it is very wrong to let him go across there, if he is just across the street, because we start out on this supposition, that this man has all he can attend to and watch in his own territory. Now, just as long as you allow that territory to remain open for this man to run into, you cannot get an agent to go in there. You want that territory occupied, and just as long as you allow three or four men to go in there from other territories and sell, and as long as you allow them a commission, so long is that territory going to be vacant. But you want to put a great big goose egg on that territory and let everybody know that there is a place that is vacant, and you want an agent for it, and say to this man: 'Now here, you get an agent for that territory for me; if you don't do it, opposition will get in there and they will sell machines, and that will hurt you all.' If you

allow a man to run into open territory he would rather spend a week getting one order than to get an order in his own territory in three days."

The N. C. R. salesmen caught the spirit. They sold. They sold according to the primer and they sold according to their own ingenuity when nothing in the primer seemed to fit. Here are some remarkable sales of A. C. MacMahon, who once held the world's record for salesmen and who is the man who put cash registers into Marshall Field & Company and into the Fair in Chicago.

"What I consider the most unusual sale I have ever made came not long after this. It was made at the point of a rifle. I shot my way right into the order. This is how it happened.

"There was a stormy greeting at the little store where I previously had demonstrated to the merchant.

"'What has happened?' I asked.

"'Well, if you were in my place, you'd think something had happened. I guess you'd be thinking about making up what you had lost rather than about paying out a lot of money for cash registers.'

"'Then something has happened.'

"'Look out there,' the wife pointed to a pile of crates in the yard. 'Those were full of turkeys and they're all gone.'

"That was the trouble. His turkeys had gotten out and my chance of closing the sale went with them. It was my job to overcome whatever was in the way of making the sale, so I told him that I was just the man he wanted to see.

"'I want to see those turkeys,' he retorted, 'and I don't want to talk about anything else.'

"'Very well,' I said, 'I'll get the turkeys for you.'

"He started to say something but I was out of the store.

"Down in a field I saw a crowd of boys throwing stones up into a tree and I went over to see about it. There were the turkeys up in the tree.

"I gave a dollar to the boy who brought me a .22 rifle and some cartridges. The boys got the empty crates and I started shooting those turkeys out of the tree.

"If you just nick a turkey in the neck, you can stun it without any permanent injury. In my younger days I had held some records for fancy shooting and now I used my full bag of tricks. Every one of those turkeys came down stunned and the boys chucked them into the crates. When the last one was stowed away, we carried them back to the store.

"I went around to the front door.

"'Good morning,' I said, just as if I had never seen the merchant before. 'I would like to talk with you a few minutes about the losses which, every day, are eating up the profits of your business.'

"'Get out of here!' he yelled. 'I've got enough to do to think about my lost turkeys.'

"'Oh, those turkeys. They're back.'

"'You're crazy.'

"But his wife went and looked. She screamed at her husband and he also ran and looked.

"'I told you I would bring them back,' I said, just as if recovering lost turkeys was my usual job. 'Now with your thanks, I will say good-bye.'

"'Come back here,' they both insisted.

"'I want that cash register you told me about,' the merchant said.

"'Give him a check,' the wife urged.

"And I walked out with the order signed and the check in my pocket.

"There was an old grocer down in central Kentucky, a follower of Dowie, who carried his religious convictions to such an extreme that he would have in his store nothing which is not mentioned in the Bible. He was a hard nut which every new salesman was sent to crack.

"I arranged for him and his daughter to go to the hotel to see our latest model registers, 'not that I expected them to buy, but that I wanted their endorsement as the leading merchants in the city.'

"The daughter, I learned, was a well-educated young lady and interested in the drama. After the demonstration I told her I had followed the dramatic profession and had often impersonated Edwin Booth. She was greatly interested and asked me to tell about him.

"This is the story I told about Booth:

"He had stopped over night at a small-town hotel. Soon the other guests and some of the people of the town learned that it was the great tragedian who had registered, and a group of the more ambitious asked the proprietor to arrange so that they might sit at the same table with Mr. Booth at breakfast.

"Mr. Booth agreed, and the next morning the guests asked him for a reading.

"Thinking that the guests might not understand Shakespeare, he said: 'I will read for you the most beautiful thing ever written.'

"'This is what he read,' I said, and started to repeat the Lord's Prayer, as Mr. Booth had given it on that particular morning.

"When I got as far as 'Lead us not into temptation,' I stopped, and turned to the merchant and said:

"'It seems as though a greater power than the National Cash Register Company has brought me to this city.

"'You have six young men working for you in your store. The love of money is the root of all evil and your money is tempting them every day.

"'The doors of the penitentiary are yawning for these young men and you are doing nothing to keep them from temptation.

"'You can preach about temptation and pray about temptation, but still you are putting temptation right in front of those six young men.'

"That's what sold him."

CHAPTER XI

FACTORY AND FINANCE

THE pushing, driving force of Mr. Patterson soon compelled the N. C. R. to look for additional factory space. In 1886 he took over two floors of the old Callahan Building and in them he produced 1,050 registers. The next year he doubled the production and new quarters became imperative. He had no money with which to put up a new building and his borrowing capacity was limited to the town banks. He had all the money they could lend him; they wanted their money back and he wanted more money. Many a manufacturer, seeing the present buildings of the company, says: "That is a fine way to manufacture—if you have the money to do it with." It may be a surprise to know that all the more important steps the company took in the way of building were taken without knowing how the new structures were going to be paid for.

The present magnificent manufacturing system of today's company is not the result of an endowment fund—the money for it was not first made in squalid quarters. The factory systems of Mr. Patterson, his welfare work and all the various new and expensive departures from the traditional ways of manufacturing were made in the face of the most critical financial conditions. They were not philanthropies, but part of the work of building up from the ground.

In the early part of 1888 Mr. Patterson realized that he

must have a new building. He decided to build in Dayton. But here is what happened:

"We tried to buy in town, but the real-estate agent lied to us and lied to the other man. We wanted a piece of ground uptown that was worth about $10,000 and that was what we offered for it. But the real-estate agent went to the man and said:

"'Here, you give me half of the balance, and I can get you $13,000 for it.'

"He said: 'All right, go ahead.'

"And the agent came to me and said:

"'Mr. Patterson, the very best I can do for you is to offer you the property at $13,000.'

"'No,' I said, 'the property is not worth more than $10,000 and that is all I will give for it.'

"He wouldn't sell it. And so one day Mr. Thomas and I rode over the present site in a buggy, and on the hospital hill, over the levee, and all around. I said to him:

"'What do you think of this?'

"'After the way those people have treated you by asking such prices,' he answered, 'I think you had better get out on the old farm and there property will cost you hardly anything. Look what room we will have to expand.'

"A short time afterward the owner came to offer his town property. But we told him that we didn't want it now and that we had decided to go out to the farm.

"He said: 'Make me an offer, anyhow. We want you in that part of town.'

"'Why didn't you want us there two weeks ago?' I asked. 'Why didn't you make us an offer two weeks ago? Why didn't you kick that man out—that man that lied to us both?'"

In April, 1888, the work of building started. Mr. Patterson made the most of it in his advertising. He always thought that a factory was a part of the advertising of a company. He held that people felt more friendly toward a product if they knew how and where it was made. He put a photograph of the breaking of the ground into *The Hustler.* In the foreground was a big fence post. Mr. Patterson, instead of having it taken away, split the top with an axe. It was to be something to compare the progress of the building with, and further to identify it he said in his advertising that the post marked the centre of population of the United States. This was not quite accurate for the centre then, according to the census, was about twenty miles away. The "split post" figures in most of the early advertising and the post itself is now in the company museum.

Each month *The Hustler* carried photographs of the progress of the work. In a month the first story was up; by June 1st the building was finished and in operation. It was a two-and-a-half-story brick building measuring 250 feet by 60 feet and it was designed to last the company for ten years. At least that is how Mr. Patterson explained to his critics his reasons for making the structure so large! It is now known as Building No. 1 but it has been practically rebuilt and is four stories high. The whole company was housed in the one building and it followed the plans of most factory buildings of the time excepting that it was a little better looking. The windows were small, the light was poor, and no attention at all had been given to ventilation. The tool room was so hot that the men frequently had to stop work in summer. But at the time it was thought to be a fine building.

The first register turned out of the new building was a No. 2 Detail Adder No. 6542, and it was sold to T. E. Twichell of New Haven, Conn. During the year the company shipped 6,561 registers—more than six times the sales of only three years before. In 1889 the company, having the advantage of a full twelve months in the new factory, shipped 9,091 registers. A new foundry building had to be added, and before the year was out it became evident that the building was not going to fill the needs of the company for ten years.

The new building cost $40,000. The company had plenty of customers' notes representing deferred payments on registers but these Mr. Patterson would not discount—it is doubtful if he could have done so excepting at a heavy loss—and he absolutely refused to raise money on mortgage. Also he did not want to issue more stock—if he had he would hardly have been able to sell it. Putting up a $40,000 building under these circumstances required courage. But Mr. Patterson merely remarked that if the company did not have the means with which to make registers it could not sell them; if it could make the registers it could sell them—so the building was bound to pay for itself.

With the new building came the formal establishment of one of the fundamentals of the success of the company and an idea which Mr. Patterson was the first to work out—the Inventions Department. Previously Mr. Patterson had himself been the department. Between 1884 and 1888 he took out twelve patents in his own name, and all through his memorandum books of this period will be found sketches of new ideas, some of which developed into patents. He had it firmly fixed in mind that the product must ever be improved, and gradually this be-

came an integral part of the business. In the early part of 1888 he said:

"We have now fifteen patents on our various registers; have applications in the patent office for seven more—several of which are nearly ready to issue.

"Much attention has been given to enlarging and increasing the proficiency of the Experimental Department, until now it is completed and ready for duty. Mr. I. D. Boyer, a scientific and practical draftsman, has been given charge of this department with two expert experimenters and model makers, whose duties are to mature and materialize his ideas.

"We consider the present machine perfect, but are not yet suited, and will not be until it is still further improved and has reached a higher standard. We shall continue to experiment and give all ideas scientific, thorough, and practical tests before putting the same on machines. No expense or trouble will be spared to fully try all ideas advanced to us by our representatives, or to try and overcome any fault that may be discovered in the present machine. We have the skilled men, and we will do what we have aimed to—perfect the National Cash Register.

"That our industry has outgrown its infancy and entered into the more prosperous and substantial growth has, within the past two months, become most patent. There was a time when each register as it was completed was looked at, commented upon and admired by the officers, office force, and each employee of the shop. We have now outgrown the infancy of our industry, but like a fond parent, failed to note the change until told of it. It has taken us two months to re-systematize and change our habiliments to those befitting our growth. All has been changed and thoroughly systematized. We have

a place for everything and everything will be kept in that place. Each department has been enlarged and thoroughly equipped. The drones have been rooted out and scienced, skilled men put into positions that require intelligence and experience to fill."

In an interview with the writer some years ago, Mr. Patterson set out his whole philosophy of keeping a product not only up with but in advance of the market. It shows one of the reasons for his success. In part, he said:

"The business that is satisfied with itself—with its product, with its sales, which looks upon itself as having accomplished its purpose—is dead. The actual burial may be postponed; but it is dead because it is not going forward. To my mind, nothing can ever be good enough; I am always dissatisfied; I preach dissatisfaction. I can always see where something might be better; and therefore our business is never at rest—and I never want it to be. The throbbing heart of business is the intense desire to do better. When that desire ceases, the heart stops beating.

"Every business which works for the betterment of humanity should be eagerly pressing forward and not waiting to be shoved forward. There are those who say that successful selling depends upon knowing what the public is asking for and then giving it to them. I do not agree with this viewpoint. I do not think that real success is attained by following in the wake of the public.

"My idea of successful business is this: Fill not only every known want of your customers but also have in ready reserve that which you calculate they are going to need next year or the year after. That is, do not merely keep up with the market but preferably a few paces ahead

in what you are actually offering and about a mile ahead in your reserve offerings.

"Every big success, individual or commercial, has followed that rule. The manufacturer who merely caters to his market is never a very big manufacturer.

"The vital point is: 'How far shall I keep ahead of the public?' If one goes too far ahead, the public will lose sight of him. That has been the unhappy fate of many brilliant men. There is only one way that I know to determine the exact lead to be taken, and that is by thoroughly knowing the whole market and its trends. We devote a great deal of attention to finding out, not only what the public wants and what it may need, but also just how ready it is to absorb new ideas. We achieve our results: first, by keeping our eyes wide open all the time and putting down all the information that comes to hand; and, second, by never considering that we are marketing a fixed product.

"There is no magic about it, no second sight, nor do I think it is a gift; it is simply a matter of not plodding along with blindfolded eyes and, when you have seen, of reasoning out the meaning so definitely that you can write it into a chart and hang it on the wall.

"We have made a policy to be just a short distance ahead, for the cash register has always had to make its market. We had to educate our first customers; we have to educate our present-day customers; and our thought has always been to keep just so far ahead that education of the buyer will always be necessary. Thus the market will be peculiarly our own—our customers will feel that we are their natural teachers and leaders.

"Look for a moment at the progress. The first machine did nothing more than tally the cash by punching holes in

a strip of paper. The proprietor by counting the holes could tell how much cash should be on hand. That was a cumbersome and unsatisfactory machine and it did not do nearly all that it should have done; but it did keep a tally. The big trouble was, however, that the proprietor had to depend upon his own additions to find the total. This brought in the possibility of mistake. The specific problem then was to make the machine keep the tally itself; thus developed the automatic adder.

"Instead of counting the pinholes the proprietor now took off the totals from the 5-cent sales, the 10-cent sales, the 25-cent sales, and so on, and adding these together got the grand total for the day. His possibility of error was reduced to a mistake in adding the divisional totals. But why should not the machine make this addition?

"Then we brought out a model that made all the additions. The purpose of the cash register was to safeguard money. Money is not safeguarded without a system of bookkeeping that will provide a final check on the cash. Therefore, step by step, the elaboration of the cash register went forward until to-day, with its printing attachments for receipts, its business divisions, and other devices, it is really more of a mechanical bookkeeper than a cash checker. In fact, it has many uses that do not at all involve the handling of cash.

"I have cited the progress of the register only to show that it has never remained stationary and has never, so to speak, merely met the market. There has always been, and always will be, a demand for a machine that will perform a necessary operation better than it can be done by hand. This demand increases as the consumer is educated into the new way; for instance, the farmer is

every year more and more receptive to mechanical aids. The first sale of any device is to be considered only as a first lesson to the consumer. The big sales are always in the future.

"We are always working far ahead. If the suggestions at the tryout demonstrate that the model will be much more valuable with changes or improvements, we call in all of the models, make the improvements, and then send them out again to be tried. And we keep up this process until every mechanical defect has been overcome and the model includes every feasible suggestion.

"We take pains to be ready. We cannot know everything; we cannot always be certain that developments of business will follow the lines that we map out. But no matter what the situation, we have something in hand to meet it or adapt to it. We work on the plan: 'The secret of success in life is for a man to be ready for opportunity when it comes.'"

The same spirit that brought about the development of the Inventions Department went through every phase of factory activity. Mr. Patterson was not a manufacturer in that he had little interest in processes or materials. His whole interest was in men. He and his brother Frank had charge of the factory but John H. was never skilled in mechanics. He thought more of stimulating production, and only when the production fell off or was bad did he try to get at the details. It is characteristic of him that he installed a big wooden register inside the door of the new factory to show the production.

He preferred to have the factory work from models instead of from drawings. When a register went wrong in service, he would have a big wooden model made to show the trouble. This system obtained for many years

and was given up by Mr. Patterson only after a deal of pressure had been brought upon him. The rule-of-thumb methods developed some queer ideas. There was no testing department and materials were bought on the notions of the foremen or superintendents—as was usual in those days—and so the best-fitted materials were not always obtained. The old registers had springs; these springs, not being made out of suitable steel, gave trouble. It was decided to abolish springs and for a time none of the registers had springs in them. What was known as the "anti-spring" crowd grew up in the factory. The registers needed springs, but it was not until C. F. Kettering—one of the inventors of the Delco System and at present in charge of research for the General Motors Corporation—proved that the fault was with the material in the springs that the registers were again equipped with them. That was one of the inside battles of the company in which Mr. Patterson had little part. Later, of course, extensive testing and research laboratories were started, but for a long time Mr. Patterson regarded them suspiciously for he could not see the results. And he liked to see things. His method of getting at factory trouble is well brought out in the following incident he was fond of telling:

"I had the attention of that crowd for as long as I wanted it. A long while ago the question was up in our organization of making interchangeable parts on the registers. I had all the foremen and superintendents in a meeting. I told them that all of the parts had to be interchangeable and standardized; the plan seems simple enough now, but at that time standardization was practically unknown—our mechanics were not used to close work and the machinery was not as accurate as it is to-day. The 'practical men' opposed me.

"I asked for opinions until finally nearly everyone in the room had spoken. I waited—I always like to have the other fellow bring up all the objections first. When they had done, I said:

"'Those who feel that we cannot make to a standard, step to this side of the room.'

"All but three of the men took their places in the opposition. Then I spoke to the three:

"'You have made one machine that works right, then go ahead and make another. If you made one, you can make more. Anything that can be made by hand can be made by machinery As for you fellows,' speaking now to the insurgents, 'you find out how to do it or look for other jobs.'

"That was twenty-five years ago; without interchangeable parts the cash-register business would have broken."

Or again:

"The lack of a boy and a barrel once prevented us from getting out ten registers a day. We found that not enough registers were coming through the factory. We traced the matter backward, and found that none had been shipped because none had been tested; none had been tested because none were assembled; none could be assembled because there were no indicators; there were no indicators because the Indicator Room did not have any dipped, and none had been dipped because the boys in the Dipping Room had not time to get that kind out. They lacked a boy and an empty barrel. They thought they could save a boy and an empty barrel. They did so, and not only caused us to fall behind orders, but to fail to get out ten registers a day. We put on the boy and the barrel in two minutes after we found it out, and

increased the shipments ten registers daily, without employing another person in the factory."

The production in 1890 was 9,091; in 1892 it rose to 15,003; and with the drive for business in the Panic of 1893 to 15,487. This made another building imperative, and in spite of the panic Mr. Patterson went ahead in 1894 with another building. He needed the building, he saw that materials and labour were at the low point and, although he did not have the funds, he went ahead with the building which was completed in 1896. This involved him in his first large-scale financial trouble—but it was also the means of getting him on his feet in due time through the obtaining of skilled financial advice. And also, because of circumstances growing out of this loan, Mr. Patterson almost lost control of the company.

The business was growing all the time and required all the profits for capital purposes, yet all the profits could not be so used, for the greater part of them was tied up in customers' notes. It is hard enough to finance a rapidly growing business entirely on profits without having the additional handicap of payments being deferred. What with the agents' commissions, the advertising, and the cost of manufacturing, each sale of a register actually required an expenditure by the company. When all the registers were of about the same price the notes falling due fairly took care of the expenditures, but in these years the registers began to increase sharply in price owing to the many improvements. The business required more money than even the large production figures would indicate, for it had to bridge the gap between the low-price and the high-price machines. The new building further cut into the company's cash; the company statement showed plenty of assets but little cash.

Mr. Patterson knew nothing of finance; he did not know how to borrow money, and, in fact, had never tried to borrow any outside of Dayton—and he already had the limit of the Dayton banks. They did not particularly help him, for Mr. Patterson was not popular with the Dayton business men; he had already launched his programme of welfare work and was doing things which the business men of the section did not approve of. It is hard to realize that he was considered a somewhat dangerous and certainly an unstable citizen. The only financing Mr. Patterson had known about had been in connection with the Southern Coal and Iron Company in Boston—which had been most unsatisfactory. He knew people in Boston; Mrs. Patterson had lived in Brookline. And to Boston he went for money—because he knew of no other place to go. He got in touch, through a note broker, with Joseph Banigan of Providence, Rhode Island, a very wealthy man and the head of the largest rubber-manufacturing company in the country. He was also something of a money lender—that is, he would take a chance if the profits seemed worth while. He had been to Dayton and knew something of the N. C. R. business. In December, 1895, Mr. Patterson called on him and after some parley borrowed $10,000 for four months at 7 per cent., pledging for the first time a quantity of customers' notes. It was a poor bit of borrowing; the amount was only a fraction of what the company needed. There is every reason to believe that Mr. Banigan knew this, for he was an expert financier. There is a suspicion that Mr. Banigan loaned the small sum because he knew Mr. Patterson would have to come back for more and that in the end he might acquire an interest in the company—which he thought had a great future.

Mr. Patterson thought only of the money that he needed for the moment. The loan was duly paid in April, 1896. By that time Building No. 2 had been paid for at the expense of working capital and the company needed still another building. The sales of 1896 were in excess of 16,000 and for 1897 promised to be still larger—they actually amounted to 23,057. Hardly had the note been paid than Mr. Patterson was back with Mr. Banigan asking for a bigger loan—although not yet enough for his real needs. He borrowed $200,000 and the Board of Directors on May 6, 1896, authorized a contract between the company and Banigan. The contract provided that the money should be advanced in instalments of $50,000 each through four months and that two years' interest at 7 per cent. should be deducted in advance. The notes had to be endorsed by John H. and Frank J. Patterson and all the receivables of the company were pledged as collateral, with the further provision that these receivables should never be less in amount than $350,000—the company could withdraw receivables as they became due, provided others of like amounts were substituted. The company pledged to do all its borrowing through Banigan for a period and actually pledged $630,000 instead of $350,000 in customers' notes.

This was only the beginning of the borrowing. Up until the beginning of 1899 the company in all borrowed from Joseph Banigan and from John J. Banigan, who succeeded him, a total of $760,000 of which $375,000 was for renewals, making a net borrowing of $385,000. Only one of the original $50,000 notes was paid at maturity and the company had a hard struggle to do even that for the business kept expanding and requiring more money. The rate of interest on the renewals was 8 per cent., and

the company paid $71,955.83 in interest to the Banigans during the period. After the death of Joseph Banigan came the most critical period—for the executors wanted payments. There is some interesting correspondence during the period.

Dayton, Ohio, January 25, 1898.

Mr. John H. Patterson,
Hotel Waldorf,
New York, N. Y.

Dear Sir:

Mr. Shepherd will forward to you to-day the Banigan contracts which have been signed by Mr. Pflum and the writer; and I have requested Mr. Shepherd to inclose this letter with his to you.

In reading over the contract the several objections enumerated below occurred to me, to all of which we ought to give most careful consideration before signing the contract. These objections are not new, but in some respects they strike me more forcibly than they did before:

1st:—The necessity of showing in each January hereafter an equally good condition as now or no renewals will be granted.

2nd:—Renewals will be granted in the future only upon the condition that we pay off $50,000.00 yearly, beginning in 1899.

3rd:—All the notes now in the vault and all that may accumulate in the future, no matter how large the amount may become, are pledged to Mr. Banigan as a collateral security.

4th:—The contract is so worded that if by oversight or otherwise we should fail to pay the interest on any note on that day it is due, then all the notes outstanding at such time become due and payable and Mr. Banigan has the option to sell all the notes accumulated in the vault at such time. The contract should provide as a safeguard to us the above could be done only after our failure to make good such defaulted payment after receiving a notice from Mr. Banigan of such default.

5th:—The seriousness of indorsing all the notes in the vault making them payable to bearer, on account of the amount of these notes

THE CHILDREN'S GARDENS

At the N. C. R. factory, 1923. They were started in 1897, and were the first Boys' Gardens in America

THE ATTRACTIVE VISTA FROM THE OLD ELM TREE

Of the N. C. R. Co.'s factory grounds, indicating how the surroundings of the employees have been beautified

constantly increasing,—and this process is to go on so long as we owe Mr. Banigan a dollar during the whole life of the contract.

The less we owe Mr. Banigan by paying off the yearly sum of $50,000.00 as stated in the contract, the greater the collateral security will become so that we may eventually hold here in the vault a million and a half of notes all pledged to Mr. Banigan for, say, a $100,000.00 debt; and still at such times as we would be unable to borrow any money for any purpose except through Mr. Banigan at 8 per cent. with all notes then on hand pledged as collateral security.

6th:—The option to Mr. Banigan is so worded that if he desires we can never borrow any money even for the purpose of paying him off, because we are bound by this contract to give him the first option of loaning to us all the money we borrow in the future; and we agree in this contract not only to give him the first option, but that the conditions of such future loans shall be 8 per cent. interest with J. H. Patterson's and F. J. Patterson's endorsement, and all notes pledged as collateral; so that, by this contract, we are tied to Mr. Banigan (if he chooses) for all the time we owe him any sum of money at 8 per cent. interest. The only way left open to untie ourselves from him is to pay all of the indebtedness out of the cash savings.

I have no doubt that these thoughts have occurred to you before this, and I do not know that there is any remedy, and I have enumerated them in the above manner just because I have signed the contract in advance of you having done so.

Yours truly,
(Signed) H. Theobald, Jr.
Providence, R. I., July 22, 1898.

Mr. George E. Shepherd, Treas.

Dear Sir:—

Your note of $50,000 falls due August 20th. We write you this early, as we had the note discounted some time ago, and as Mr. Banigan's condition is becoming serious, in fact, so much that his death may be looked for, we will probably not be in condition to take up the note before maturity. In the event of his death his affairs will of course be tied up temporarily awaiting the appointment of executors, and should your note mature during that time, we could

perhaps prevent its being protested. Kindly advise us what you think you will be able to do in the matter and oblige,

Yours respectfully,
(Signed) JOHN J. CONNLY,
Private Sec'y.

July 25, 1898.

MR. JOHN H. PATTERSON,
Waldorf-Astoria Hotel,
New York, N. Y.

DEAR SIR:—

Enclosed is a copy of a letter we received to-day from Mr. John J. Connly. We have also sent a copy of the letter to Mr. Shepherd at Providence, where we understand he will be soon. We also sent a copy of this letter to you at Boston, so you will sure get it at one place or the other.

We have not replied to Mr. Connly's letter, leaving that for you or Mr. Shepherd to do in person. Mr. Connly should arrange for the renewal of the note, according to our agreement with Mr. Banigan. If, however, it should be impossible for him to renew the note, then he should grant us the privilege of borrowing elsewhere, by either altering our present contract or giving a new contract covering this one point. We hope the matter may be satisfactorily arranged.

We have inclosed in the letter to Mr. Shepherd, addressed to Providence in care of our agent there, a copy of the Banigan contract.

Yours truly,
(Signed) H. THEOBALD, JR.

July 29, 1898.

MR. JOHN H. PATTERSON,
Boston, Mass.

DEAR SIR:—

We were advised yesterday by telegrams, one from Mr. Beck and the other from Mr. Lauver, of the death of Mr. Banigan.

This of course makes it absolutely necessary for you to see Mr. Connly, as indicated in our letter of July 25, to arrange for the handling of the note for $50,000 which will fall due August 20.

This strikes us as a favorable opportunity to get the contract changed. If it is true, as Mr. Connly states, they will be unable to renew the note, then the executors certainly cannot refuse consistently to borrow somewhere else. Perhaps this might be an opportunity to get all of the objectionable features removed from the contract.

By the way, on July 22nd we addressed you at the Waldorf Hotel a letter about this business, and I have just learned to-day that the letter was returned here undelivered a few days ago, but that it was reforwarded on July 27th. Fearing that possibly you may never have received it, we inclose a copy of the letter in question.

Yours truly,
(Signed) H. THEOBALD, JR.

Mr. Patterson was ill and away from Dayton a good part of this time; probably worry over the notes was the chief cause of his trouble, for with the endorsements of his brother Frank and himself the notes bound up the entirety of the company and his own property—although his own property consisted almost wholly of the N. C. R. stock.

He happened to be introduced to A. C. Ratshesky, a young Boston banker who had founded the United States Trust Company in Boston and who was an exceedingly keen man. Mr. Patterson had never had skilled financial counsel; he went over his affairs with Mr. Ratshesky and then Mr. Ratshesky made a trip to Dayton and did some investigating on his own account. He found that the company was extremely rich in assets and ought to have a fine future but that it had no financial connections of moment and was woefully short of working capital. Over all were hanging the Banigan notes. The first thing was to get rid of the notes and this was done by an issue of preferred stock, bearing 7 per cent. interest, to the amount of $1,000,000. The Banigans agreed to float

$600,000 of this stock at par, although on the side they received a commission of three dollars a share. The state of the company's finances is well shown by a report of the treasurer dated 31st July, 1899:

> The sales for the first six months of 1899 were $651,978.10 in excess of the sales for the first six months of 1898—the increase being 46 per cent. Owing to the rapid increase of business we are compelled to pay out money for material, labour, commissions, and various other necessary expenses faster than we receive it, as the average time of receiving payment for our machines is six months after shipment. Consequently, in order to carry this increased business, we have already been compelled to use $100,000 of the $800,000 received from the sale of Preferred Stock, in addition to the receipts from sales. Out of the money received from the sale of Preferred Stock we had arranged to pay the Banigan notes amounting to $325,000, erect the new building, add two stories to Machinery Hall, and make other needed improvements, costing $225,000 and purchase necessary real estate amounting to $14,000. Thus it will be seen that we have already used and arranged to use $664,000 more than immediate receipts from sales will give us. As this is considerably in excess of the amount we will receive from the sale of Preferred Stock, and as there is every indication that our business will continue to increase and money be required faster than it can be collected on outstanding notes and accounts, I am compelled to call upon the Company for additional capital.

On April 9, 1900, the remaining $200,000 of preferred stock was sold.

The laws of Ohio did not permit an issue of preferred stock bearing more than 6 per cent. so the company took out a New Jersey charter. Eventually the incorporation was returned to Ohio and the capitalization, increased to $10,000,000, divided into $1,000,000 preferred and $9,000,000 common. Practically all of the common stock was held by John H. Patterson and his brother Frank.

PLEASANT SURROUNDINGS FOR N. C. R. WORKERS

A corner of one of the factory buildings, showing the lovely effect of the use of lawns, flowers, shrubs, and vines in relieving what would otherwise present a drab picture

ONE OF THE REST ROOMS FOR WOMEN AT THE N. C. R. FACTORY

On the death of Frank his stock went to his widow with the exception of a block that he bequeathed to Robert Patterson, his nephew.

With the Banigan notes out of the way and the prohibition against borrowing lifted, Mr. Ratshesky began to build up a credit for the N. C. R. He took promissory notes for his own bank and also he sold notes to other banks. Often he had the company borrow when it did not need the money, just in order to be able to make offers to buy back the notes before their due dates. He also had Mr. Patterson always buy up his notes when money was hard to borrow—not because it was good business but for the moral effect on the banks. It gives a notion of vast stability to have a concern out in the market trying to retire its notes when most other concerns are out trying to get money. Working slowly and carefully, Mr. Ratshesky built up for the N. C. R. the bank credit to which it was entitled. N. C. R. notes became staples, and thereafter the company was never pinched for money.

The preferred stock, through some accident, or possibly at the direction of Banigan, contained a voting clause. This was unknown to Mr. Patterson until some years later, after the death of Frank Patterson. John H. had a majority of the common; he did not have a majority with the preferred voting and he owned no preferred. He discovered an attempt under way to buy up enough of the preferred to take the company control from him. At once he consulted Mr. Ratshesky; the stock was scattered about New England in small blocks. Mr. Patterson gave Mr. Ratshesky full power to buy the stock at any price and in a little while Mr. Ratshesky had picked up enough of it to put the control of the company

back again into Mr. Patterson's hands. Had the scheme gone through, Mr. Patterson would have been ousted from control. But he nipped the plan. This was one of the most intense periods of Mr. Patterson's life, for he saw the control of all his work going away from him. At times he was almost frantic.

It was Building No. 3 that went up during this critical period. All the N. C. R. buildings were put up in a hurry —Mr. Patterson could never wait for anything and also all of them were different from other factory buildings of the time. On No. 3 he put his favourite inscription:

"We are a part of all we have met."

"Our people don't know just what that means," he said, "but the more they study it the more they will see in it. Then I remembered that Bishop Potter said: 'This new improved machinery is throwing men out of employment.' I wanted something that would counteract the Bishop's statement, so we chose this motto, 'Improved machinery makes men dear and their product cheap.'"

Most of the N. C. R. buildings were put up in record time. Mr. Patterson always saw the company losing money for lack of manufacturing facilities and rushed the work. Take Building No. 4. This is his story:

"We needed that building very much. We were losing money every day because we did not have it. So I went down to see if everything was being done that could be done. The contractor said:

"'Yes, we are pushing it along as fast as we can.'

"We had just come back from New York, where they were building the Flatiron Building, and that gave us an idea of how to do things. They had the whole building covered with bricklayers. I said to the contractor:

"'Can't you put on more men?'

"'No,' he answered, 'we can't get them. We'll catch the steel men anyhow before they get the building up.'

"Then I went up to the steel men and said to them:

"'You will have to hustle, won't you? The brick men say they will soon be up with you.'

"The steel men answered:

"'The brick men will never catch us.'

"So I said:

"'Let's make them hustle. Let's put up a race. Let's run all night.'

"'Oh,' the steel men answered, 'we can't put up steel at night. It's dangerous. Men will step on shadows, and we don't want any man killed.'

"I sent for Reeves.

"'Reeves, how many lights can you put up there so that there will not be any shadows?'

"'Oh, it will take about ten.'

"Then the steel men said:

"'If you are going to do that way we can rivet at night.'

"I told Reeves to raise the brick men five cents an hour, to give them luncheon, to give them supper, and advertise for additional men, to send out to Springfield to get men, and to get them anyway. I turned to the stenographer:

"'Send this telegram to the contractor at Chicago: "John Smith: We are going to extend these two buildings and want you to bid on the contract, but you can't do it because you have incompetent men here. Your bricklayers are slow, your workmen are not pushing. Your steel men are slowing up. You come here to put things in operation. Come to-morrow. Very important."'

"This was pretty strong, but it was the truth. I wanted the building covered with men."

Which was Mr. Patterson's way of doing things!

CHAPTER XII

WELFARE WORK AND LABOUR

AS WAS noted in the last chapter, Mr. Patterson did not know much about manufacturing and it did not occur to him that a factory required special attention. He had done many unusual things, but he had not conducted his factory in a manner different from the usual run of factories. In 1894 cash registers began to come back from Europe, and especially from England. They would not add correctly and had caused many clerks falsely to be accused of dishonesty. The company had just succeeded in building up a fine foreign business and home business was booming. The same registers had gone out in the United States, but their inaccuracy had been caught in time to prevent serious damage to the company.

The registers came back to the factory in groups—some fifty thousand dollars' worth of them altogether. Mr. Patterson had from time to time investigated evil practices such as the contract system which had crept in, but with the return of the registers he moved his desk into the factory and started a clean up that was to have not only factory-wide but nation- and world-wide results. For then began the idea of the modern factory—a place in which human beings might work in the greatest comfort, with entire self-respect and with the highest efficiency. The old idea was that a factory was just a place to work and that the employees were "hands."

He had several years before established the duties of the officers and foremen, in what I believe is the first effort anywhere toward what is now known as "job analysis." In 1889 he issued a pamphlet which, among other directions, contained these:

President.—It is the duty of the President to look after the general management of the business. He is to sign, with the Secretary, all orders to change the construction of registers, and all orders for experimental work on registers. To examine and read daily the complaint book and to attend to the duties of the Vice-President during his absence.

Vice-President.—It shall be the duty of the Vice-President to sign all checks; to notify the Superintendent of the number of registers to be made during each following month, and to have general superintendence of all manufacturing departments. He is to attend to the duties of the President in the absence of that officer.

Secretary.—It is the duty of the Secretary to attend to the receiving and answering of all general correspondence. He is to sign, in connection with the President or Vice-President and General Superintendent, for changes in the construction of registers, and to have a copy of such orders pasted in the scrap book of the Superintendent, Purchasing Agent, Entry Clerk, Inspectors, and machine room. He is to sign with the President all orders to the General Superintendent for experimental work on registers.

Treasurer.—It is the duty of the Treasurer to attend to the collection and payment of all moneys. To the keeping of accounts of purchasers and bookkeeping of the establishment.

Purchasing Agent.—It is the duty of the Purchasing Agent to have charge of all employees in his department and to ascertain in advance the needs of and to contract for and purchase all stock and supplies for the office and factory. To superintend the receiving and keeping up of stock, and to keep the stock in order.

Editor.—It is the duty of the Editor to have charge of all advertising, compiling and arranging the same; also the mailing of same. To edit and superintend the mailing of *The N. C. R.* and Out-Puts. To issue or endorse all orders on the printing department. To superintend the receiving and sending out of extra supplies, and to issue to

the Treasurer charges for the same. To superintend the addressing of Out-Put envelopes or wrappers, and general management of the department doing the above work and to make out weekly and monthly reports of expense of manufacturing.

Departments had gradually been added, but the big change was that from a mere place to work to a place where human beings could work.

How this all came about and the theories which he held regarding the workingman and his job were explained to me by Mr. Patterson, two years before he died, in substantially this fashion:

"Labour is suspicious—and has a right to be. Generally speaking, it is not fairly treated and it has not been given either its rightful share in industry or its proportion of income. The idea has been to get everything that is to be had out of a man, keep him down, regulate his wages by the smallest amount he will take and not by what he is worth, and when he is worn out, to throw him off like an old shoe.

"Were I a worker for wages, I should be deeply suspicious of my employer until he had demonstrated to me that he was willing to play fair. I would refuse charity in the place of what should be mine by right, I would not take kind words instead of money, and, generally speaking, I would wait to be shown.

"I think such is the right and proper attitude for a workman. He has the welfare of himself and his family as a first consideration and he would be a fool to let any one grind him down. I have no respect for the contented workman; I do not want contented workmen; I have no respect for any one who is content in business, for that means that in so far as the individual is concerned, there can be no further progress.

"The satisfied workman is another matter. He is the man who will recognize when his wages and conditions are really as fair as they can be made, that nothing is being withheld from him that should be his, and that more money and a higher position will come to him as a result of his own effort—that no one but himself will block his progress.

"I divide workmen into three classes:

"1. Those with enthusiasm, loyalty, and intelligence; and who believe in the company.

"2. Those who are tolerably enthusiastic, loyal, and intelligent; but who do not believe in the company's methods.

"3. Those who believe nothing, who deliberately misconstrue everything that is done, and are chronically dissatisfied.

"The first is the ideal class and the backbone of any company; the second class can be educated; the third class will seldom respond to anything, for its members have warped natures.

"When first I began my work, most of the employees of the National Cash Register Company were in the third class, a few were in the second class, while the first class had an exclusive membership. None had any enthusiasm—but I do not now see why they should have had any. Enthusiasm is the biggest asset in business. It is the one thing that you have to work eternally to keep up. The N. C. R. was built by the enthusiasm of the organization both in the shops and in the field. It is to the stimulation of enthusiasm that most of our work is directed, for it is impossible for any one not to do his work

well if he takes a joy in its doing. I have found that a man lacks enthusiasm when:

"1. He has not an appreciation of the work in hand.
"2. He is out of sympathy with what you are doing.
"3. He lacks knowledge of the business and the motives of the officers.
"4. He is not in harmony with his surroundings.
"5. He does not realize his obligations.

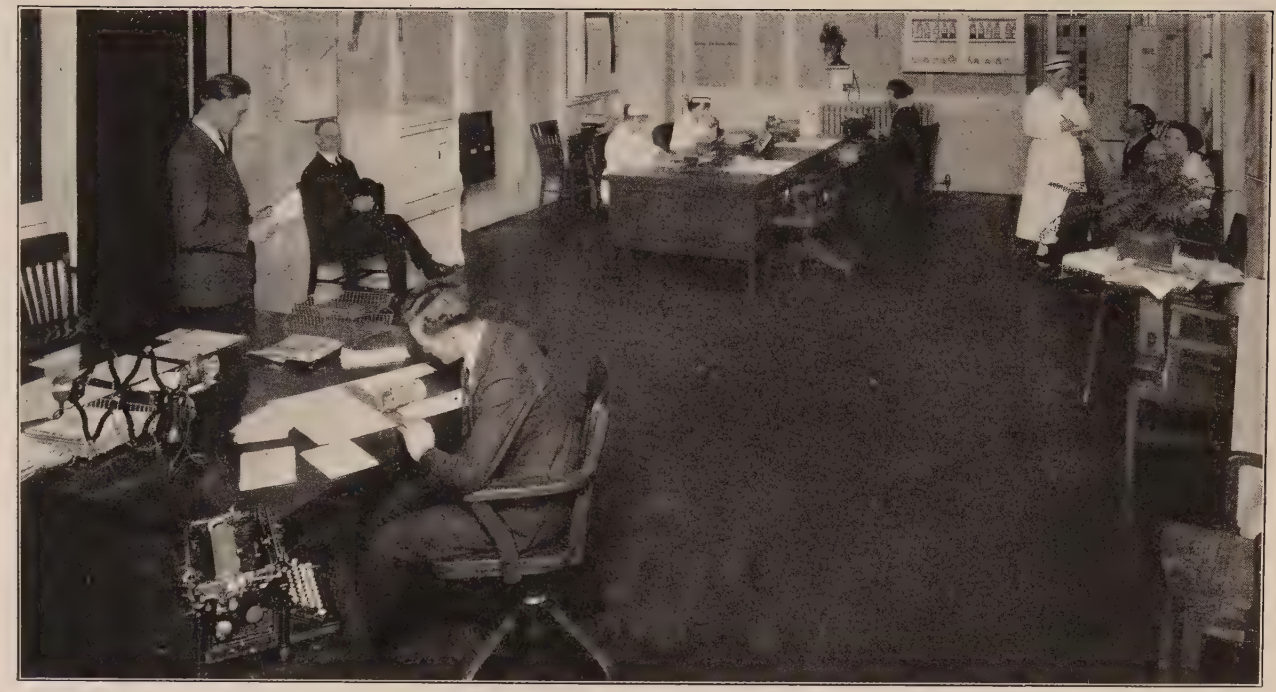
"Therefore, we have solved the labour problem, so called, if we can infuse enthusiasm into all the various kinds of people who go to make up a working force. It is a give-and-take proposition of mutual benefit and mutual responsibility. I have no solution to propose—there are no solutions as yet. But I have learned these big points:

"1. Treat people well and they will treat you well. They will not instantly respond but they will in the long run. Be square with them.

"2. Do not try to take any advantage and do not try to get the last cent's worth of energy out of them. They will give you their best if they think you are giving them your best; they will not work the better for being forced.

"3. It pays to do good; it pays to help them to help themselves in every moral and physical way and also to give them every possible opportunity for advancing to higher positions and more money.

"4. The basis of a good product is labour—workers who go forward loyally and enthusiastically as a team. Hence it is necessary to let the workers know what you are trying to do by bringing them together frequently in meetings in which the ideas and ideals of the business can be explained.



RECEPTION ROOM AND CLINIC OF THE HEALTH AND HYGIENE DEPARTMENT

THE NOON-HOUR MEETING AND ENTERTAINMENT AT THE N. C. R. SCHOOLHOUSE

During each lunch-hour there is a motion-picture show with music, the entertainment being in charge of the Welfare Department

"5. Let every worker have the opportunity to make complaints and suggestions for betterments, reward them adequately, and make it impossible for a man to be fired on account of a personal dispute with the foreman or other subordinate.

"6. Extend your personal acquaintance with the men by every means possible.

"Such are the principles I have gradually learned in my years of company management, and they are about as successful as is possible under the present organization of society. They are not successful in every case and they do not secure the coöperation of every man, because —and it must be recognized—there are some men who will not be fully pleased no matter what you do.

"There are some men who will not do a day's work for a day's pay, but, I am glad to say, there are now very few such among our normal working force of six thousand. Constant work and effort have brought a very satisfactory condition, but it has been a long, hard, uphill fight—a fight which one who was looking for gratitude would quit. Helping men to help themselves is not a task to be undertaken by any one who is not content to have his motives misunderstood, or who may be disturbed by undeserved censure. The sustaining power of far-seeing labour direction is the knowledge that you are doing good and that your business is not going forward over the dead bodies of countless workers. The other and less sustaining motive is that it pays.

"My lessons have been learned through bitter experience. They seem simple enough. So they are in the stating, but they are complex in execution.

"To go back, when we began business few employers considered workmen other than as people to be hired at

the lowest possible wage, worked as hard as they could be worked, and then fired when any one felt like firing them. It did not make much difference then where or how the men or women worked, because it did not seem to have occurred to any one that in the shops were human beings and not mere machines who came in the morning and went home at night. I say that was the general attitude toward labour. I do not recall now that I then thought much differently—or perhaps I did not think at all.

"Then I got my lesson—an unforgettable one that nearly put us out of business. It was worth every cent that it cost. We had made up a group of cash registers to sell in England. It was our first large export, and of course the adding mechanism had to be somewhat changed to calculate in pounds, shillings, and pence. We expected every one of them to be a splendid advertisement.

"Every register in that lot came back across the seas because of faulty workmanship. They were worth $50,000, and that was a very great deal of money to us in those days. It was a big shock—a smashing blow. We still have those registers; we have them in a pile, surrounded by glass, locked up as an object lesson for all time.

"Why was the construction so bad? It was all in the attitude of the men. They had no heart in their jobs, they did not care whether they turned out good or bad work. Then I looked further into conditions and I had frankly to confess to myself that there was no particular reason why they should put heart into their work.

"I moved my desk from the office right out to the factory floor. I had determined that things were going to be made right and I wanted to discover what the troubles were by living with them. We simply had to make that

place decent to work in or go out of business. Given a chance, the men were ready enough to complain. Their complaints were reasonable. Here are a few characteristic ones.

"The first man I asked: 'What is the trouble with this place?' answered: 'It is too dirty.' 'Very well,' I replied, 'we will have it cleaned to-night.' And we did.

"A night man grumbled: 'We have to wash in dirty water. The day men have clean water.'

"'All men should have the same kind of water to wash in; if one man has clean water, all men should have clean water, if one man has dirty water, all men should have dirty water. There is no reason why all should not have clean water. We will put in the wash basins to-night.' And we did put them in that very night, although I had to fight to have it done and stayed there most of the night.

"Or again: 'Jones is a friend of the foreman—he has a locker; the rest of us haven't any lockers.'

"'Every man is equal here; if all do not have lockers none shall—we shall all have lockers.' We got lockers.

"Having put in lockers, the next step was shower baths; and we arranged that each man might take two baths a week in the company's time. This was particularly appreciated then when so few of the homes, or rather houses, had bathing facilities.

"The condition of the women was as bad as that of the men. The girls would not stay. I asked one who was leaving why she had decided to quit. She said:

"'It's too dark and dirty and cold around here.'

"The rate of turnover was alarming—it amounted to a procession. But I could not blame them; they were right: it was no fit place to work in. So we began to im-

prove their conditions, doing something each week. First came a lunch room where they could make coffee and eat in peace; it was in the attic, but it was far better than eating beside a machine. Then we put in adjustable chairs with backs in the place of the uncomfortable old stools which the girls had been using at work.

"We were not then making money but we raised all of the wages. Sweeping and satisfactory changes could not come about in that old factory, but what little we did there aroused intense opposition. I had first to fight it out with my associates and then to stand the jeers of other Dayton employers. They asked: 'What is that fool going to do next?' 'Does he expect to make ladies out of the girls?' 'He is not only spoiling labour with pampering, but he is paying 25 or 50 cents a day more than they are worth.'

"They called me 'crazy'; it has been my privilege to be called 'crazy' many times during my life. It is an epithet which I prize highly, for I take it as a compliment to a vision that is denied to many unfortunates. Remember that we had then done very little toward what is now called, somewhat unfortunately, 'welfare work'; to-day the factory which did not have at least what we then had could not find workmen to enter it! There are advantages in being crazy!

"But if you want order, you must first put things in order. We needed a new factory, but the employment problem appeared to me bigger than simply a new factory; it seemed necessary to revamp the whole community. This was impressed on me by a man whom I tried to engage for a fairly important executive position. He refused.

"'I would not work out there for a day if you gave me

I—HEALTHFUL CONDITIONS FOR WORKERS

"There is not a single device," said John H. Patterson, "for the comfort and safety of the employees that we have not tried. . . We take the attitude that if anything more can be done—not reasonably done but if it can be done at all—for the improvement of comfort or safety, we will do it."

II—HEALTHFUL CONDITIONS FOR WORKERS

At the left is an exhaust system that removes dust from the air in the vicinity of the workers

the whole place. There is nothing to do after hours and there is no place to live. It is just work, work, work.'

"And it was. Slidertown, as I have said, was a very undesirable residential section and needed a complete cleansing. To put a new factory in such surroundings would have been like sticking a pearl pin into a frayed and greasy cravat. Personally, I felt that it would be wisest to move to another city, for there was then really no reason why I should stay in Dayton except that I had been born there and the site of my father's farm was available for building. I had no good business reason. But we were prevailed upon to stay—and then I began in earnest the big work of which I am very proud.

"First came a new factory. I wanted a lot of light; men work better in a flood of light. I asked the architect to design a building that would be nearly all glass—in which the walls would be little more than frames for the glass. He said that it could not be done; the building would not be strong enough and, even if it were, the big glass surface would forbid heating. I told him to go ahead anyway and if he could not make the design, I would try to find someone else who could. Again they called me crazy. But the building went up with what was then an unheard-of amount of glass. We had no trouble in heating it. But those walls were solid as compared with our newest structures, which have 80% glass. And, in passing, let me ask if any one builds a poorly lighted factory to-day?

"In the new building it became possible to provide adequate space for each employee and plenty of light. We painted all the machinery a light colour, arranged hoods to absorb dust, put in every safety device that could be devised, had first-class baths and locker rooms, rest rooms

for the women, hospitals and first-aid stations, medical inspections, and free, clean aprons and sleevelets for the women.

"In fact, we did everything that we could discover to make the conditions of work as comfortable as possible. In the subsequent buildings this has been carried much further because we have learned through experience, and to-day there is not a single device for the comfort and safety of the employees that we have not tried. We take the attitude that if anything more can be done—not reasonably done, but if it can be done at all—for the improvement of comfort or safety, we will do it.

"A new Slidertown came about through suggestion. As an example to the neighbourhood I arranged flower beds and shrubs around the factory building, sodded the ground, and put in neat walks. The youngsters of the neighbourhood bore a bad reputation—they stoned out the windows of the new factory. But I thought I could find other amusement for them.

"The boys were not really bad; they had merely been without anything useful to do. So we prepared a large plot of ground and invited the boys to plant gardens. We gave them tools and seeds and put a gardener in charge to show them what to do. They grew splendid gardens and we organized the first garden club for children in this country. Now they have a corporation of their own, which they manage themselves and declare dividends from the sale of their joint produce. To keep them occupied in winter we started the Boys' Box Furniture Company, another self-governing concern, and here the children learn how to handle tools; they market their products which are of many kinds and make quite a little money.

"The example of the factory and the boys wrought a revolution in Slidertown. The old houses hid among vines and their yards blossomed with flowers. There came new houses and Slidertown vanished; instead we now have South Park—a clean, neat suburb filled with good-looking, comfortable houses in which any one might live.

"Men and women work better when they have self-respect; the first step toward self-respect is decent living and working conditions. A man cannot come out of a hovel, have a dirty breakfast, go into a dark, noisome factory, and then do a good day's work; he can do neither himself nor his employer justice under such conditions. He will be still more efficient if, added to self-respect, is the knowledge that he is on the way to a better job, if he has something to stimulate ambition The best stimulation is knowledge, not merely knowledge of work, but general knowledge of what is going on in the world and what people outside of his own little group are thinking about.

"All of this makes for better citizens, and the first requisite of a good workman is that he be a good citizen. The man who does not respect his country will not put much loyalty or enthusiasm in his work.

"Teaching is my hobby and we provide the means to find knowledge. The employees have to go to some trouble to stop learning. It takes many forms and directions. First we have the big building known as the 'N. C. R. Schoolhouse.' During each lunch hour we have here a motion-picture show with music, the entertainment being in charge of the Welfare Department. Those who care to do so may bring their lunch and eat it during the performance; many do this, while others take

their lunch in the company's dining hall and then hurry over.

"In the dining hall, by the way, they get a meal of soup, meat, vegetables, and dessert for 35 cents that is enough for any one and is composed of the best quality of food that money can buy. Of course we lose money on this as well as on the dining room in the office building. But we get the loss back in the better work done.

"In addition to the motion-picture performance we have many lectures on public affairs. For instance, I think we have obtained every well-known war speaker, and generally we select speakers with the idea of keeping the men in line with the best outside thought of the day on big matters. They hear these lectures in company time and are paid just as though they were working. Each lecture costs us about $2,000 in time alone, but that loss is returned in increased interest.

"Then there is the library furnished with all the current periodicals and some thousands of good books; the N. C. R. City Club in which are held the 'owl classes,' a night school for such employees as have not had the chance to get an education before the start of their working days; and also to enable those who desire to take up some special line, such as mechanical drawing or accounting.

"We subscribe for and send direct to many of the employees the best magazines and metropolitan newspapers. Men should not be shut up with purely local and domestic concerns; they ought to know what kind of a world they are living in. Following out this thought, we send the foremen and sometimes groups of workmen to conventions and on trips to New York. They pick up enough new ideas to pay several times the cost of the travelling.

THE REMODELLED N. C. R. SCHOOLHOUSE

It has a seating capacity of 2,300 and contains a large stage, a pipe organ, complete stereopticon and moving-picture equipment, spot-lights, etc., etc.

THE LIBRARY OF THE N. C. R. CO.
The photograph was taken during the noon hour

"And on these trips we encourage the men to live in first-class style and to spend money. It is really surprising how much more efficient a man is for having seen something outside of his own home town. I often tell the men: 'Go down to New York, buy a new suit of clothes, and get some of the hayseed off you!'

"The most comprehensive plan, however, is that for the education of apprentices, which can only be sketched very broadly here; it is a whole subject in itself. I am convinced that the country needs all-round mechanics who are also all-round men. The boys who must start in to work early are often robbed of their youth, and cannot find an education at the very time when knowledge would do them the most good, therefore arrangements were made with the Dayton Coöperative High School for continuation classes by which the boys from sixteen to eighteen years may go to school four hours per week and work the balance of the week.

"Following the grade school they may go to the Dayton Coöperative High School, attending school two weeks and working in the factory two weeks alternately. Cincinnati University students alternate four weeks in the university and four weeks in the factory. At the end of the university course they take an engineer's degree. The apprentices are given a certificate when they have served their time and I personally sign each one of these certificates; the term is three years.

"We have other schools for teaching adults and just now, because of the shortage of labour, we are putting adult unskilled workers through a part of the apprentice course and paying them full wages. Even though many of the apprentices start out for themselves at the end of their courses instead of going on with us, we do not feel

that the expense of their education is lost, for any one who helps to provide the country with skilled mechanics is really helping himself as well as the community.

"The hygiene side is important; it is good for a man to go out among the green fields. We have baseball diamonds, a large number of tennis courts, quoit court, several community clubs, and the Old Barn Club, which is now also open to the public; and for many years we had also the N. C. R. Country Club, which I gave to the city for public use in 1918.

"So, instead of a dirty factory in a dirty town where there was nothing to do but work, we now have, I have been told by many people, the largest opportunities for clean, healthy work, education, and physical exercise that are to be found anywhere in the world.

"Do the employees like the changes? At first they did not make much use of the facilities, but now they do; and I find that they are steadily growing in appreciation since they have discovered that there is no string attached to anything. Only time will show men that you say what you mean and mean what you say. One of my assistants not long ago met the wife of a workman who had left to take the very high pay offered by a munition factory—pay which was out of all reason for any employer not engaged in rush war work. He asked her how she liked the new place. She answered:

"'There is nothing there but a lot of money. We have no place to go, no parks, no flowers, nothing but high wages. We are coming back.'

"Keeping workmen is not altogether a matter of wages, but the wages are of the highest importance. I have always believed in paying men well, but paying them on results. Every job that can be so arranged is on the

piece-work basis; we encourage the making of the highest possible wages.

"It is sometimes said that I oppose labour unions. That is not true. I have refused to run other than an open shop for the single reason that unions prevented me from having a closed shop. Many years ago the union question came up and all of our higher executives, including myself, spent the greater part of three months in almost daily conferences with representatives of the unions.

"They had nothing to protest about, for our wages were higher than the union rates and the conditions of labour were better than they could have demanded anywhere. But a restive spirit began. The men objected to petty details—to the bread in the dining room because it was not union made, about some door springs that had not come from a union shop. Always they were threatening to strike over nothing. I continued the parleys to the limit of my patience.

"They threatened to strike again. Never a question of wages or hours had been raised. Instead of letting them strike, I struck. At three o'clock one afternoon I had the factory whistle blown and closed down the plant. We stayed closed until the workmen sent delegations one after another with petitions to reopen. We reopened and have had no further labour trouble.

"I have never opposed unions as such; I think that, well organized, they are mighty good things. The workman needs all the protection that he can get. But I do think that they should confine themselves to bettering conditions rather than to fomenting strikes for trifles, and I think that to-day the big labour union leaders do take this broad attitude.

"I have sketched very broadly the bigger lessons which I find are at the base of labour control, but I have not spoken of putting over the plans to the men. Plans may be good in themselves, but no one has the full benefit unless he understands them. The complement is personal attention and contact, and this we get through our schoolhouse. Every little while we all get together there and talk things over. I propose all new plans from the platform of the schoolhouse; we discuss all new points in meetings with the aid of diagrams and charts. I hold that frequent meetings between a president and his men are invaluable if all are to work on the same lines and with the enthusiasm that brooks no difficulties.

"Does it pay? All through the shops are scattered signs with the two words 'It Pays.' There is no charity in anything we do. Isn't it just good business to lose three cents on a girl's lunch and get back five cents' worth of work? And so on throughout the whole. It is not possible to reduce it all to a profit-and-loss account; there cannot be an exact balance sheet. But I do know that our labour turnover is trivial when compared with most concerns of our size, and that careless work is very rare.

"These are two of the most important elements in the success of the business and they are not capable of exact measurement. Indeed I am so thoroughly convinced that it pays that I would recommend changes to keep labour happy no matter what might be the immediate effect upon our business, for it is only the ultimate effect that counts.

"It all comes down to this: In our farmhouse my mother nursed the hired men and cared for them just as though they had belonged to her; she felt that they did.

They came to feel so, too. The factory has now taken the place of the old farm, but the methods that were a success on the farm are just as good to-day in the factory. Times have changed but human nature has not."

CHAPTER XIII

THE SEARCH FOR HEALTH

EVERYONE who came in contact with Mr. Patterson or who has seen much of the National Cash Register Company must have noted the extraordinary emphasis placed on health, hygiene, and the regular ordering of human affairs. Very few know anything of the struggle that lay behind all of this—why it was that Mr. Patterson put health first, or why it was that he was for ever devising means to help the individual to master self. One cannot really understand this whole attitude toward health unless first one understands Mr. Patterson's view of the purpose of life and then of his own struggle.

He thought of the body purely as a machine. A machine is valuable only as it is efficient. Without health the human body cannot be efficient. Therefore, at all costs, one had to have health. A machine is an instrument of destruction, not of production, unless it be under full control. Therefore he wanted a man to be in full control of himself. Everything that he did and advocated had human efficiency as its end.

He really did not know what pleasure was. He did not know the meaning of the word "recreation." He thought of pleasure and recreation not as things of themselves but as aids to efficiency. Probably no individual ever did as much as Mr. Patterson toward providing for the pleasure and recreation of those who worked with him, or

who lived in his city, or with whom he came in contact. In Hills and Dales Park he provided what is probably the finest of all pleasure grounds. He wanted everyone to get out in the open air and when he saw the land about Dayton being taken up in enclosed estates, when he saw "No Trespass" signs springing up like dandelions, he threw open this great tract of land so that his own employees and the people of Dayton might always have green meadows and forests to play in. When he saw expensive country clubs going up, he put up a country club of his own with dues so slight that a bootblack could pay them without effort.

But every item in the long catalogue of the things that he did to give people health and pleasure was conceived by him solely to the end that the people might make better use of their lives. He gave the impression of being purely materialistic—for he talked of everything that he did in terms of material results. He would urge a man to play tennis or go riding, not for the sport of the thing, but to get money-making health. But to think of Mr. Patterson as a money-making machine trying to produce a great number of other human money-making machines would be to miss the truth.

He talked in terms of money because he wanted to talk in a universal language. Money is the one subject which needs for its presentation no education whatsoever. The most impassioned oratory fails when opposed to the shining face of a gold piece. That is human nature. Mr. Patterson was dealing with human beings as they existed and not with hypothetical human beings.

He wanted to make people better. He was an inveterate reformer, but also he knew that the catching of the hare had to precede the cooking. He caught with

gold. He knew how useless it was to talk of cleanliness to a man who lived in a hovel without a bathtub. And also he knew that cleanliness as an abstract subject had no great moving appeal. But if he could show that tubless man how the lack of bathing interfered with his getting many things that he wanted much more than the bathtub, then the bathtub became important as a means to an end. So, what would seem to be a complete materialism and an over-emphasis on the importance of the dollar in Mr. Patterson's life was really only his method of presentation. He refused to fool himself into the belief that spiritual development could precede economic development—which is something worth thinking about.

Mr. Patterson inherited from his ancestors a constitution of wiry tenacity. At no time in his life did he weigh much over one hundred and fifty pounds and he was five feet eight and one half inches tall. He was never husky, but he was exceedingly strong and lithe. Few men had his powers of endurance. He had no ills. No one can remember Mr. Patterson having had a really serious illness. Being a farm boy, the memory of the amount of work that he had to do as a youngster remained so vividly with him that he never went in for any form of sport. He took exercise in order to keep his body in condition and not for any pleasure that he got out of it. For many years he took no exercise of any kind. He advocated exercise and he advocated fresh air for others—very early in *The N. C. R.* we find him giving health hints. But in the early years he applied none of the rules to himself. Always an early riser, he frequently worked uninterruptedly until well past midnight. Often he did this day after day and month after month. He had a voracious

THE GIRLS' DINING ROOM

With a seating capacity of 500. Here the girls can obtain for 20 cents a meal of soup, meat, vegetables, and a dessert

THE DINING ROOM FOR MEN. IT HAS A SEATING CAPACITY OF 1,350

appetite and he ate heavily. He smoked ten and sometimes more cigars a day. He never liked any form of alcohol, but in the early days he was not a total abstainer and he had no objection to his associates drinking so long as their habits did not interfere with business. In his own habits he was most irregular. Breakfast was about his only fixed meal. He would frequently forget all about luncheon and sometimes about dinner. Then he would rush off somewhere, eat a great deal in a short time, and get back to work.

A home life might have adjusted his habits, but he was forty-four years old when he married Miss Katharine Dudley Beck in 1888 and his habits were already fixed. The affairs of the company were then so critical as to engage practically all of his time. He was unused to home life and he was just beginning to get accustomed to it when Mrs. Patterson died in June, 1894, leaving him with two children, Frederick Beck, two years old, and Dorothy Forster, less than a year old. Mr. Patterson was helpless. He knew nothing whatsoever about children and he had to be away so much that at once it was evident that he could not possibly rear his children. He wanted very much to have them with him but he simply did not know what to do, and so Frederick, who is now the president of the company, and Dorothy, who is now Mrs. Noble Brandon Judah, were brought up almost wholly by relatives, principally by his sister, Mrs. Joseph H. Crane. Once more Mr. Patterson was alone with the Cash Register Company.

He loved his children but he did not understand them. One understands children only through being with them through the early stages of their development—during the time when they change from tadpoles into bullfrogs.

Mr. Patterson missed all this. And it was not until Frederick and Dorothy had passed their adolescence that he really began to know them well, and it was only from then on that John H. Patterson began to get anything out of life for himself. I do not mean to get anything in a material way, for that which was material was for him only a means to an end. But until he was past seventy he might as well have been a disembodied spirit, working for the state, as far as anything intimately personal might be concerned.

He never worked for himself; he never worked for money; he did not really know what money was, excepting that it bought things that seemed to give people pleasure and also that it was a lure to cause other people to better themselves. Although the cash register has solely to do with the recording of money or of that which represents money, and although Mr. Patterson devised countless arguments why every merchant should have a cash register, he was himself about as unlike a cash register as any human being that ever lived. Out of the profits of the company he took very little for himself. In later years his personal salary ranged from eighty to one hundred thousand dollars a year, and his stock dividends for many years were restricted to 2 per cent. But he never knew how much money he had because he never kept any track of the checks he drew.

And he never, excepting when his attention was called to it, made any particular distinction between his expenses and company affairs—he could not, for there was never a moment of his life when he was not directly or indirectly on company affairs. It was his company, and he treated it as such. He could never work up any interest as to how or where the Accounting Department

would dispose of some of the items he sent in for payment. He despised bookkeeping anyway, and one of his favourite sayings was to the effect that you must never try to make an executive out of a bookkeeper for he might drop all the affairs of the company to run to earth an irregular item of eleven cents. Likewise he would not make an executive out of an engineer. He said that an engineer might think the company's fate hung on a thousandth of an inch.

He charged to the company's account or paid out of his own account just as the spirit moved him excepting that there is a distinct suspicion that often he sent charges to the company just to see what the officers might do about them. But he did not charge in this fashion because he cared who did the paying. He was just as likely to pay a strictly company item out of his own pocket.

He was not extravagant in the ordinary meaning of the word for the smallest of all his expenditures were those which had to do with himself. He could easily have travelled in a private car, but he never did so unless he had a large party with him. Only in his later years did he take a compartment or a drawing room. He spent a good deal on his clothing, about which he was exceedingly particular. But he never bought the highest priced automobiles; he never maintained an elaborate establishment; he never owned any jewellery to speak of, and he never bought any expensive jewellery. The idea of spending several hundred thousand dollars for a string of pearls was to him unthinkable. He gave his money away. Very few personal appeals passed his notice. He sent countless numbers of teachers and clergymen on tours of Europe or of the United States. He thought that travelling was the best of education. In this way he

managed to use up his entire income, and frequently his bank would ask the officers of the company to see if they could get Mr. Patterson to stop drawing checks for a while.

He had no investments. His capital was in the Cash Register Company and in the people he aided. For many years he paid personal bills in cash as he went along and usually he carried one or two thousand dollars in new money with him. He would not use old money. But as he grew older he often mislaid his pocketbook. It frequently happened that when he asked you to luncheon or dinner at a hotel and the check came he would rummage through his pockets and then, in the most painful embarrassment, borrow a dollar or two from you to tip the waiter. Always the next morning without fail you would receive in new bills the amount that you had loaned to him. He would tip lavishly for good service and pay nothing at all for bad service. At the very moment when he was shamefacedly borrowing a dollar he would undoubtedly have somewhere at least a thousand dollars. Everyone who travelled with Mr. Patterson was in constant terror lest he should lose his money, for his pocketbook was constantly turning up in the most unexpected places. Mr. Patterson was the only one who never bothered about his pocketbook. Finally he gave up even attempting to carry much money and gave all his funds to Doctor Barr and his valet who were nearly always with him in his later years. When informing them of this arrangement, he presented them with a little red account book and a system of bookkeeping.

"Now," he said, "we won't have any more trouble. On this left-hand page you write 'Received' and on the right-hand page, 'Paid out.' That is all the bookkeeping

we are going to have. That is all the bookkeeping any one needs. When you need more money, tell me."

And Doctor Barr said that Mr. Patterson never once looked at the account.

But to get back to health. The tense, lonely, driving life that Mr. Patterson led broke down his digestion during the nineties and he began to realize that if he were going to be a machine he would have to take care of himself. On one of his foreign trips he had met Horace Fletcher, who was then bringing out the principles which we now know as "Fletcherism." Mr. Patterson wanted to get rid of his indigestion at once. He had no patience with any kind of a cure unless it promised immediate and complete results. Speaking of Mr. Fletcher, he said:

"It has been my good fortune to be thrown in intimately with Mr. Fletcher, whom you know as the author of 'Menti-Culture, or the A. B. C. of True Living,' 'Happiness as Found in Forethought,' 'That Last Waif, or Social Quarantine,' 'Glutton or Epicure' and so forth. In reading a book, one often wonders if the author practises what he preaches. I am glad to say that I think Mr. Fletcher lives up to all he advocates, and I shall always look back with pleasure and profit to the days which we spent together among the mountains of Switzerland.

"Mr. Fletcher claims that health, harmony, and happiness are the natural heritage of man, and the best illustration to prove his theory is his own personal experience. When I first met him, two and one half years ago, he carried sixty pounds of surplus flesh, could not endure much fatigue, and complained of several ills. His weight now is down to normal, circulation perfect, and general health most excellent. He had lost all of his ills and one day rode 192 miles on a bicycle."

Horace Fletcher was then living in Venice. The fame of his methods of mastication had spread through the world. His theory was essentially to take very small quantities of food and masticate them with extraordinary thoroughness. Mr. Patterson at the same time fell in with a book written by Lewis Cornaro called "The Art of Living Long." Cornaro was probably the first man to take up vegetarianism on other than religious principles. He was an Italian of the Renaissance period who, having been given up as incurable, proceeded to take charge of his own diet. He took food in exact quantities, varying the quantity according to the state of his health, and because of, or in spite of, this theory he lived well beyond 100 years. He set out in essays exactly how he managed. Mr. Patterson immediately made Cornaro's book the companion of his Bible, and he read in it as in his Bible, every day.

Horace Fletcher was assisted in his work by his son-in-law, Doctor Van Someren. Mr. Patterson consulted with them.

Doctor Van Someren was in charge of the fast and this is the account taken from his records:

"Mr. Patterson came to Venice, as you all know, this summer. There he fell ill and lost his appetite. I counselled him to wait until his appetite returned, and he waited thirty-seven days, taking nothing but water. He did exactly as he liked. He lay down. He walked about outside. At times he was very depressed, and at times his mind was wonderfully active. He used to come to table to see us eat but never had the slightest desire for food.

"On the thirty-third day he went to bed and stayed there for three days as he felt rather weak and disinclined to get up.

"On the thirty-fourth day he began talking of food. He continued to do so until the end of his fast. His mind wandered over all things edible. He thought, be it noted, how delicious everything seemed to be, but as yet had no inclination to eat anything.

"On the thirty-sixth day he left his bed feeling remarkably strong and he walked about with a firm pace. On the evening of that day he had a strong desire for some stick bread, which is made in that part of Italy. I counselled him to wait one day to make sure, and on the thirty-seventh day, finding an increased desire for this same food, he broke his fast.

"Now, what happened to Mr. Patterson during all this time? We had left Venice on account of the heat and had gone up into the mountains. While it was sunny and warm during the day, the evenings and nights were cold and refreshing. He lived in the open air. He did exactly as he willed. He lay down and took sun baths every day in the midst of beautiful scenery. Why did he not have an appetite? Why was this natural function in abeyance? Because during this period of abstention processes of regeneration were going on in his body. These processes were demonstrable to ourselves, among whom was a noted physiologist from Harvard University. These processes of regeneration were occurring more quickly because Mr. Patterson had relieved his body of the strain of digestion and the body consequently was able to concentrate all its efforts on restoring those parts of the body which were not normal, and the abnormality of which had caused him much discomfort for many years.

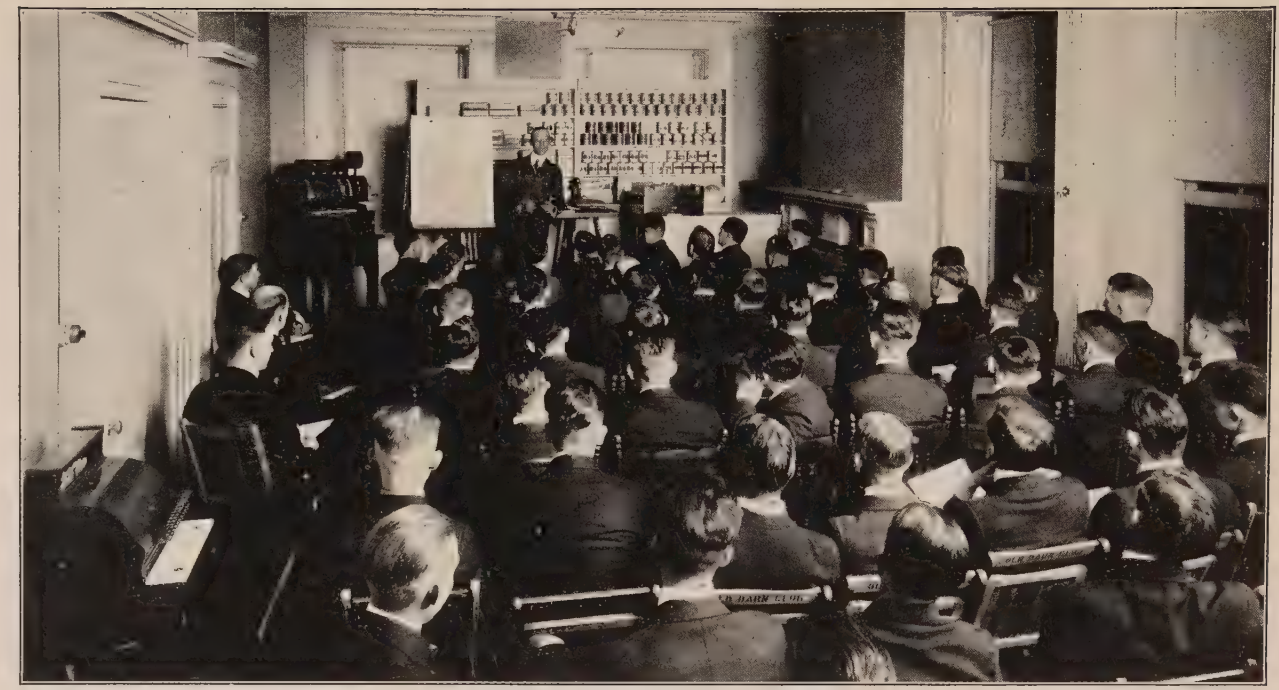
"During all this time Mr. Patterson was living on his own body, consequently when he again began to take food his muscles were in an exhausted condition. Conse-

quently, it has been necessary to build those muscles up by taking food in economic quantities, and plenty of fresh air."

Mr. Patterson never told the full story of this fast, but E. Wake Cook, in his book: "Betterment, Individual, Social, and Industrial," includes a full and fairly accurate account. He probably obtained his facts from Doctor Van Someren. Some allowance must be made for the enthusiasm of the author:

A truly remarkable case has come to some extent under my own observation. A distinguished American, one whose eager, tireless spirit would wear out the strongest of bodies, or half-a-dozen bodies, if it could inhabit and use them in turn, had to pay the penalty of the too-strenuous life. Although he came of a splendid stock, the wear and tear of the high-pressure work in the United States brought on a complication of internal troubles which under ordinary treatment might have soon ended his valuable life. Starting for Europe for the needed rest, he travelled by the Southern route and through Italy during the hottest months of a hot year (1904) and arrived at Venice in a high fever. He placed himself in the hands of the English physician, Doctor Van Someren, Mr. Fletcher's co-worker. For three years this doctor had been tentatively applying Doctor Dewey's principles with invariable success. After explaining them in their simplicity to his patient, the latter determined to adopt the seemingly heroic treatment. He totally abstained from food, and in twenty-four hours the fever had quite left him.

He went with his doctor to Val Sesia, a grand Alpine valley under the shadow of Monte Rosa. There for thirty-seven days he continued his fast. Although he rested nearly all the time, he despatched business matters whenever they needed attention with his usual alertness. He lost nearly a pound in weight every day. I saw him on the thirty-fifth day of his fast; he was thin, but there was nothing to suggest that he had been fasting. During all this time there had been no appetite, but there was an occasional desire to smell the food which was pronounced increasingly good. On the evening of the thirty-sixth day there was a flooding of saliva into the mouth in such quantities as to cause frequent swallowing,—a sign of returning appe-



AN OWL CLASS IN SALESMANSHIP

THE COMMUNITY COUNTRY CLUB

Formerly the N. C. R. Country Club, which was given to the city of Dayton in 1918 by John H. Patterson. The property comprises 325 acres, and its valuation at the time it was given was $800,000

tite. This phenomenon was transitory, and on the advice of the doctor was disregarded. Nature not only demanded food as soon as she was able to deal with it, but she also dictated the kind of food needed. The first food desired was some of the local bread baked in sticks and therefore all crust. The next day a roasted potato was desired. With these simple foods the long fast was broken; and it is a significant fact that these should have been chosen. It is needless to say that every mouthful was faithfully Fletcherized.

During the whole of the fast, or dietetic rest, the careful doctor had the waste products analyzed, and it was noted that all the pathological symptoms gradually disappeared. By the time the appetite returned, all traces of disease had gone!

When we left him at Alagna, he expressed the intention of resting another week, and then travelling to England by easy stages. Four days later he astonished and delighted the members of the Physiological Congress at Brussels by appearing before them. Among them was Dr. Henry Bowditch, of the Harvard Medical School, who had seen a good deal of the earlier stages of the fast, and was anxious concerning the daring experiment, as he regarded it, which the doctor and his distinguished patient were engaged in. It was an impressive demonstration of what will probably prove to be the most important chapter in the history of the healing art, which has hitherto lagged so sadly behind the splendidly progressive science of surgery.

The doctor prescribed a systematic course of exercise, and accordingly this new-made man went with him on a riding tour through the south of England, with a Sandow trainer in his suite. They rode from twenty to twenty-five miles a day, with a good deal of walking, fishing, and a regular course of Sandow exercises. The enjoyment of regained health brought about a return of the old tendency to overwork, and caused a setback; but a few days of dietetic rest put matters right.

Two months later I saw him in London. He was still thin, but the eyes were bright and the complexion clear, and he was despatching various affairs with that easy, unhurrying celerity which is one secret of the American's wonderful power of work. I saw him change into flannels and go through a severe course of exercises under his Sandow professor—exercises that would have tired out many a younger man—and all the movements were bright and rapid.

After this he went round the world, taking his physical trainer with him, and continued to carry out the exercises systematically. He returned from that long, fatiguing, and exciting trip strong, fit, and, as his friends said, looking twenty years younger. He is greatly impressed with the value of systematic and all-round exercise; and he finds, as he informed Doctor Bowditch, that with it he can get through as much work in four hours as he could do formerly in a long and exhausting day.

The worth of this cure is a matter of speculation. The best opinion seems to be that it permanently injured Mr. Patterson's health, for he was never the same afterward, although at the time he claimed that he had found youth. When he got back to London, as is noted in Mr. Cook's account, he was very weak. Sandow was reputed to be the strongest man in the world. Therefore Mr. Patterson went to him to get strong. That was his direct way of doing things. He secured from Sandow a sort of rubber or trainer by the name of Palmer, an enterprising cockney with a finely balanced body but what appears to have been a somewhat unbalanced intellect.

Mr. Patterson was on his way around the world and Palmer went along. It was his duty to see that Mr. Patterson took proper exercise, so every day, no matter what was going on, Palmer put Mr. Patterson into flannels and sent him through a course of Sandow calisthenics. He made him ride. What is more, whoever was with Mr. Patterson had to follow the same programme. A group of executives of the company who were in London and Paris at the request of Mr. Patterson were included in the régime. Mr. Patterson's theory was that whatever was good for one person was good for all persons. He thought the treatment benefited him. Therefore, everyone whom

he could control had to live in the same way. Palmer accompanied Mr. Patterson around the world and back to Dayton. He established himself in Mr. Patterson's confidence. Having looked over the executive personnel of the N. C. R., Palmer decided that they did not get enough exercise—which was true. He had himself made the health and hygiene overlord of the institution.

He prescribed early morning exercise for all executives and immediately all of the executives were required to be at the factory at five o'clock in the morning, to go through calisthenics, take a bath, and be rubbed down. They were given breakfast at the factory. A little later Palmer decided that all of these men should ride horseback in the morning. Mr. Patterson bought a great string of saddle horses, and for a long time any one who happened to be wandering about Dayton at dawn could see a cavalcade of N. C. R. executives, led by Mr. Patterson and Palmer, riding through Hills and Dales. Probably nothing like this ever happened before in an American business institution. Those of the executives who did not know how to ride and would not learn how to ride ceased forthwith to be executives. It was laid down as a maxim that no one who could not manage a horse could be expected to manage men.

The whole adventure has its funny side, but actually it was a mighty good thing for these men, shut up all day as they had been, to get out into the open. The N. C. R. people who date from this period are about as healthy a lot of individuals to-day as can anywhere be found.

Palmer as a trainer was a unique and advantageous addition to the company, but Palmer could not stand power. He had not the remotest conception of business and yet he found himself practically dominating the

lives of a great number of able men. He began to think that he knew a great deal about men and business and he thereupon confided to Mr. Patterson that he had the power to read the characters of men from their faces. Mr. Patterson fell in with the idea, for he dearly loved novelties and this was a complete novelty. He would try almost anything once. And also Mr. Patterson liked to be regulated.

He let Palmer go ahead reading faces. Palmer gave adverse reports on the faces of some of the men who were then very prominent in the affairs of the company. They went out. It may be that Mr. Patterson was not displeased at having some of these men out, for although he pretended to accept all of Palmer's findings he really accepted only those that he wanted to accept. No one could ever quite tell how much Mr. Patterson was being fooled in anything. Certainly he was never fooled for long, and it may be that Palmer was only an excuse for a general reorganization. After a group of men had gone, Mr. Patterson affected to be less pleased with Palmer's findings than he seemed to be before and Palmer was sent to England to take charge of the business there. His stay in England was brief and disastrous, and then he passed out of the service of the N. C. R.

From the time of the great fast on Mr. Patterson was always under a doctor's care. His digestion was bad and he was afraid of apoplexy. He began to take the most extraordinary and the most circumstantial care of his health, and doctors became to him something in the way of a recreation. He visited doctors all over the world. Some of them were honest; others thought that John H. Patterson as a patient was a decided asset. Mr. Patterson always agreed with every diagnosis and with the treat-

ment, especially if it were interesting, and for a time he nearly always did what the physician of the moment prescribed for him. But he tired of doctors as he tired of everything else, and it was not until the latter years of his life that Dr. F. G. Barr managed to induce him to give up doctors as a recreation and to adjust his diet on reasonable lines. Doctor Kellogg, the founder of the Battle Creek sanatorium, had considerable influence over him, or, to be more accurate, he agreed with a number of Mr. Patterson's health ideas, and Mr. Patterson spent part of every year in this sanatorium.

Mr. Patterson's diet was extraordinary and was largely of his own devising. From 1912 to 1917 he ate no meat at all. He ate many baked potatoes—far too many, so the physicians say. He used to breakfast on toast which he dipped in olive oil. He was very particular about this olive oil and for years sent to Italy for a certain brand. Then he went to Italy and saw how the oil was made. Thereafter he always sent to California for his olive oil. He went to bed at nine or ten o'clock and usually got up about four. Sometimes he would ride in the early morning, or again he would work. He liked to be at the office not later than seven. Later, he adopted the rule of "work an hour, rest an hour, work an hour, and go home." He had a bedroom and bath at the factory and usually at eleven o'clock, or sometimes at ten o'clock, he would leave whatever he was doing, have a massage, a bath, and a rest. He took four or five baths a day and he was extremely particular that the temperature of these baths should be prescribed as well as the length of time that it was wise for him to stay in them. He had a very curious belief in the exactness of medical prescription. For instance, if he had been ordered to stay in his bath

ten minutes and happened to stay in eleven minutes and then did not feel well the rest of that day, he would set it down to the extra minute in the bath.

He drank a glass of hot distilled water every half hour, and there was a servant at the factory—a fine chap by the name of George—under instructions to bring in this glass of water no matter what kind of a meeting Mr. Patterson was engaged in. Often, as he sipped the water, he would say:

"This is good. I wonder if it would not be good for all of us. We might all do better work." And turning to the servant, he would say: "Bring hot water for everybody."

He stopped smoking because he thought it was harmful. He gradually cut everything out of his life that he thought was harmful. He tried to regulate himself in every act. For a time he had his food weighed. He was very jealous of Edison's ability to get along with so little sleep. He envied Napoleon's reputed five hours' sleep. His valet, Roberts, who was with him for many years, every day made up a sheet on his health and handed it to Doctor Barr. He had his pulse and his respiration, his temperature and his blood pressure, taken daily.

Now the plain fact is that much of this was recreation. He would come out of a meeting in which he was having a hard time to convince his associates of a plan that he wanted to put into operation, all worried and excited. He would call Doctor Barr, who was always near by, and have his pulse and blood pressure taken. Doctor Barr would usually find them normal. Mr. Patterson would insist that they were not normal, and would ask:

"What shall I do? Had I better stop work and go home?"

Doctor Barr would suggest some simple application

like a cold towel. In a few minutes Mr. Patterson would feel better.

"Now, let me go back," he would say.

He would go back, and usually he would win his point. It might take him another hour or it might take two hours, but no matter how long it took he would come out of the meeting feeling fresh and bright and with no thought of his health.

His daily programmes varied. One that he used for a long time was to rise between five and six and to work for an hour. Then he would go to the office, arriving some time before seven. In the middle of the morning he would have his massage and rest. At twelve-thirty he would go home and have lunch and he would go to bed for an hour or two, and after that ride hard for another hour or two. On his return he would have another bath, take dinner at seven, and then have meetings or callers until ten o'clock when he went to bed.

He read a great many books and newspapers but he rarely read all of any, because he became disgusted unless the language was very simple and direct. If he found that a book contained a good idea, he would have it sent to the factory and drawn up in chart form. He went to the theatre a great deal, but rarely stayed out a whole performance. It must be remembered that he went to the theatre not only for pleasure but in order to learn something that he could use in the N. C. R. affairs. Here is a typical evening. Mr. Patterson and Doctor Barr were in Philadelphia attending a convention. On the afternoon of the last day Mr. Patterson said before the convention:

"We have all had such a good time, we had better have another meeting this evening."

Most of the men had already made their plans to go home but of course they stayed. When the convention hour came around Mr. Patterson suggested to Doctor Barr that they go to the theatre. He said the convention would be better off without him.

"Let us go to see John Drew," he said, "I have always liked John Drew. Let the men at the convention enjoy themselves."

After about ten minutes of the play Mr. Patterson turned to Doctor Barr:

"Do you like this? I do not think much of it. Let us try something else."

They went on to a musical comedy, getting seats in the second row. In five minutes:

"I don't see anything but legs. It is the same old stuff. Let us try somewhere else."

They went around to a play. This one kept him ten minutes.

"Isn't there anything else in town?"

They next tried a travel lecture at the Academy of Music. Mr. Patterson not only stayed through this but went up and congratulated the lecturer when he was through. He simply could not rest unless he were learning something.

He loved music but he did not know the "Doxology" from "Yankee Doodle" and he never could understand why any one wasted time going to operas. He was never able to sit through a whole opera. Once he gave a hotel orchestra twenty dollars to play a march. They played "Annie Laurie," but not as a march. It proved to be exactly what Mr. Patterson wanted. Leaning back, he said: "Now that is a real rest." He could not sit through Harry Lauder. Once in London, when Lauder was in the

THE COMPANY'S PICNIC

Twenty-six thousand persons, consisting of employees and their families, attended the picnic and were served two meals at the Company's expense on the day this photograph was taken

HIS SEARCH FOR HEALTH

Mr. Patterson believed in horseback riding not only for himself but he prescribed it for his executives as well. It was laid down as a maxim that one who could not manage a horse could not be expected to manage men. Mr. Patterson was seventy-seven years of age when this photograph was taken

midst of one of his best songs, Mr. Patterson, sitting in the third row, gathered up his fur coat, his hat, his cane, his gloves, and marched out.

He was ever restless. He liked to go up to a camp in the Adirondacks—"Number Four" it was called—but he was no sooner there than he was ready to turn back again. New York was about the only city in which he would spend more than a few days. He liked to take long trips through the wilds, but when the novelty of the thing began to pall he would break all records to get back to civilization. Just a few years before he died he covered 250 miles in a canoe through Maine and 300 miles on horseback through Glacier National Park. He gave much of his time on this trip to seeing that the guides kept the camp scrupulously clean—a man of cleaner and more orderly habits than Mr. Patterson never lived. Whenever they started away from a camp he would insist that the place be left in such condition that the next camper would have nothing at all to clean up. The guides were restive under his control and one of them, thinking to end the trouble, got up during the night and threw the only shovel into the lake. He thought that Mr. Patterson would not know about it and that the cleaning up would have to be abandoned for want of a shovel. He did not know with whom he was dealing.

Mr. Patterson said nothing at all about a shovel the next morning when they broke camp; he did not even insist upon the camp being left neat. But after they had gone about ten miles he began to talk shovel. He talked nothing but shovel through the whole day. He said that they could not make camp without a shovel. Finally, he offered five dollars to any one who would get a shovel. The guide went back during the night and fished out the shovel!

On another trip through the Rocky Mountains suddenly when the party was ready to start he asked for a collapsible canoe. There was none to be had. The three guides and the nine packhorses were all ready to start. For an hour Mr. Patterson kept bellboys, waiters, and game wardens running about hunting for a canoe. He could not get one. Then he wanted to know the nearest point at which a collapsible canoe might be had. Someone thought one might be bought at a town about fifty miles away.

"Here is $100," said Mr. Patterson to a game warden. "Get on a boat, go down the lake, hire a horse, and get to that town as fast as you can. Meet us fifty miles out."

Two days later the warden came into camp with the canoe. Mr. Patterson looked it over carefully; he found that it had been made near Dayton and he was delighted. He thus proved that a determined man could get what he wanted anywhere.

He tired of this trip and decided to end it at once. That involved travelling forty-eight miles in one day. The guides said that it could not be done.

"Fifty dollars to you if you make it," answered Mr. Patterson.

They made it.

It is extraordinary that so active and nervous a man as Mr. Patterson and a man so impatient of authority should so closely have ordered his life. His life through its final twenty years was as strictly ordered and as ascetic as though he had lived in the most rigorous of monasteries. He wanted to overcome the flesh and to make a thinking, working machine out of himself. And he nearly succeeded. But it was a terrific struggle—a struggle of which only Mr. Patterson knew the de-

tails. He fought himself every day—he fought himself harder than he fought any one else.

Every day he made notes of the things that he should not have done during that day and resolved not to do them again. He had a quick temper; he often lost it. But never did he grow angry without regretting it afterward. Realizing that the strain of anger threatened to have serious effects, he spent several days listing the people and things which irritated him. Then he avoided coming into contact with those people and those things.

He drew up for himself what he called "My Monthly Constitution." He had it printed and distributed among the N. C. R. people. It is a thin paper booklet and on the outside it says:

> The Constitution of the United States is to protect the people of the United States against themselves. It was written and signed and was a good thing. What was good for all is good for the individual, hence I write and sign my Constitution to protect me against myself.
>
> Verbal orders don't go.

The first two pages concern health. On the first page was "Things not to do" and on the second: "Things to DO." The next division is: "Family and Business Affairs," likewise separated into what to do and what not to do. Then are printed these rules:

1. Make good resolutions intelligently and record them.
2. Accumulate all circumstances which will reinforce your resolutions.
3. Keep away from temptation.
4. Keep away from associates who discourage you.
5. Put yourself in conditions that encourage the new way.
6. Seize the first opportunity to act on the resolutions you make.

7. Make engagements incompatible with the old way.

8. Never suffer an exception to occur until the new habit is securely rooted in your life.

9. Remember, until the new habit is fixed, each lapse makes it more difficult.

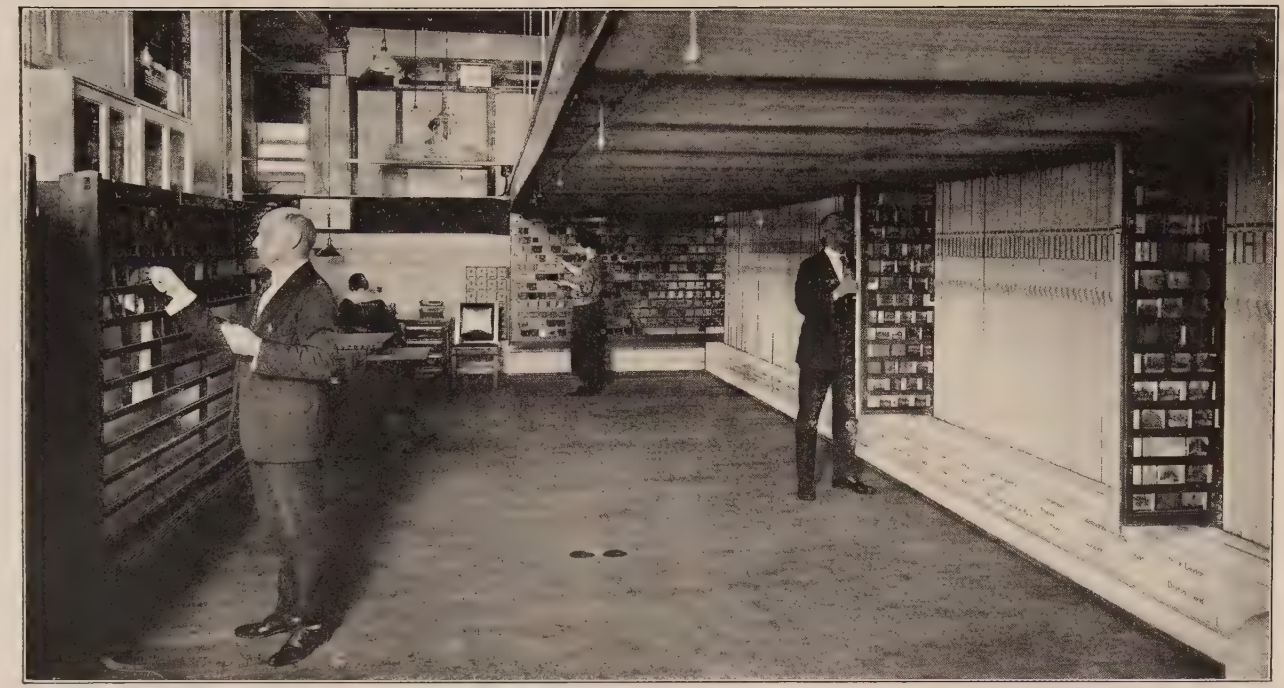
10. It is the keeping, and not the making, of good resolutions which affects the brain.

Mr. Patterson made out and signed a constitution for himself every month. He carried it in his card case and he referred to it almost every day. He liked to make rules—for himself—and for others. And these were among his favourite principles:

"To do all in our power to win health and to keep it is as much our duty as to be honest."

"He who overcomes others is strong but he who overcomes himself is mightier."

"Live simply, deal honourably, reduce selfishness, moderate desires."



THE "SLIDE ROOM"

In which are filed, for ready reference and use, more than 60,000 coloured stereopticon slides

WELFARE HALL

Built primarily as a dining room for the whole force of employees. Its interior was changed in one night from a dining room into a horseback riding course, used once only, then changed back again

CHAPTER XIV

MEN AND MANAGEMENT

IT HAS been said that no sales organization anywhere in the United States numbering more than twenty-five people is without someone who received a course of training in the N. C. R. For Mr. Patterson dealt not in things but in men—he thought that the machine was only a human aid and that if you made the human being work aright then the machine would work aright. Everything that he did was in the way of developing men, and that he did develop men is evidenced by the number of concerns which have N. C. R. men among the officers.

For instance: Thomas J. Watson is president of the Computing-Tabulating-Recording Company; Alvan Macauley is president of the Packard Motor Car Company; Henry Theobald is president of the Toledo Scale Company; E. S. Jordan is president of the Jordan Motor Car Company; Harry Ford is president of the Saxon Motor Car Company, and Lee Counselman was formerly its president; R. H. Grant is president of the Delco Light Company; C. F. Kettering is president of the Delco Company and also first vice-president of the General Motors Corporation; E. A. Deeds was formerly at the head of the whole Delco interests which C. F. Kettering and he developed; F. A. Wagner is president of the Monarch Engineering Company; Jacob Oswald is president of the Roto-Speed Company; William Pflum is president of the Burke Manufacturing Company. This is by no means a

complete list of the men who have gone out from the N. C. R. to head other corporations, but in addition to them there is a host of men who, while not actually at the head of their corporations, hold very high positions in them. Of these are E. D. Gibbs, advertising manager of the Goodrich Company for many years; E. St. Elmo Lewis, advertising counsellor, and Lee Olwell, assistant to the president of the National City Bank of New York. The list is almost endless, for, in addition to the men who became prominent in the company before going elsewhere, there are thousands of others who received training with the company and who, although their abilities did not happen to be the abilities required by the N. C. R. to bring advancement, make their marks outside the company.

For it is to be remembered that the N. C. R. under Mr. Patterson was just one great, throbbing personality in which a man of seemingly small ability might make a large success while another of large ability might be a failure. For instance, until quite recent years an accountant could never arouse Mr. Patterson's interest; only a few figures interested him and he was appalled by great reports. Many a good accountant found the door just because he tried too hard to interest Mr. Patterson in the costs and financial records of the business. He wanted an accountant who would tell him all about the business in a couple of lines—just as all his life he wanted a secretary to whom he could hand letters with such comments as "Yes, ten lines," or "No, four lines," and have the things done with. But, although the particular requirements for promotion within the company might at times be unique, the training was all-round in its scope. As Mr. Alvan Macauley says:

"The six years I spent under Mr. Patterson were very

useful and interesting, and extremely valuable to me. I was a natural conservatist studying the methods of an extreme radical. For some time I was out of sympathy with his methods. He was so very different that it took me some time to see the principles underlying his methods. In time, I came, of course, to have a profound admiration for his greatness as an industrial leader.

"He was constantly speeding up everybody; frequently making business moves that were primarily expensive for the sake of the speeding-up effect on the organization. One of the impressive things he did shortly after my connection began was, on a Thursday, to make the statement that he wanted the foundry sodded by Sunday. It was an almost impossible task, but it was done. He probably knew it would cost at least twice as much to do it in so short a time, under forced draft and with day-and-night labour. Undoubtedly he argued, and rightly, that the effect on the organization of a superhuman accomplishment would more than offset the expense involved.

"Mr. Patterson was a strange mixture of the human and the harsh; he had strange friendships. He was usually lavishly generous but occasionally was parsimonious—apparently for no good reason. He would occasionally attempt to regulate the smallest details of the lives of his workmen—as to when and how often they should bathe, the size of their tips to hotel waiters, and what they should pay for their neckties and where they should buy them. Usually it was the bigger things he dealt in, and he usually dealt in them in a big way. Always he had before him the rule that men accomplished results for two reasons, and only two: namely, hope of reward or fear of punishment."

Mr. Patterson, as I have said, worked with men as perhaps no other man has ever worked with them. He

never thought of anything but men. If the product were in trouble, he looked to the men who made the product; if the selling were down, he looked to the salesmen. And he thought of these men in an elemental way—he thought of them solely as money-making machines. Or, to be more accurate, he treated them as money-making machines. He did not have a profound knowledge of human nature—in fact, he really knew little about men and their motives, but he did know that most men either like money for itself or for the things it will buy. On this he based all his plans of management.

He deliberately created discontent by insisting that N. C. R. men spend money lavishly—an executive must always take the best room in the best hotel in the town. Hundreds of men have been sent to Europe with instructions to spend generously and freely; clerks have been picked out of departments at random and sent to New York to have several suits of clothing made at the company's expense. He was always trying to give men a taste of what money would buy so that they could never become satisfied with their lot. He did the same thing with the wives of the executives and salesmen; frequently he would send parties of executives and their wives to New York or to Europe and he always insisted that on these trips the wives be bought one really fine gown at the company's expense. He urged the men on to work and greater effort not only by direct promises of direct reward but by the indirect method of stimulating desires which money alone could satisfy.

Probably no one else has ever quite followed this method—certainly no one carried it to the lengths that Mr. Patterson did, and it might seem at first to be a harsh, even a cruel method. For what happened to the

men in whom only the desire was awakened without the means to earn the money to fulfil it? But Mr. Patterson's answer would have been to the effect that successful men are not born but made—that most of the making has to be done by the man himself, and what the man principally needs is the urge to work. He proved that in himself, for no man was less fitted by temperament for business than was Mr. Patterson. And so he took discontent as the active force of life; he was afraid of contentment. He was afraid of people around him becoming content. He refused to believe in perfection other than as a goal far off that could never be reached. He would seldom praise a good piece of work and if he did he would join an exhortation with the praise, as:

"That's fine, now do better."

He insisted that all good work should be rewarded in money and in fame but he never let any one rest on past laurels. A man who made a good record had his picture printed in *The N. C. R.* with an account of what he had done—he did this partly to reward the man and partly to challenge all the other men to go and do likewise. He wanted results and only results; every plan of the N. C. R. was designed to estimate men by their results—and then to pay them by their results. Whenever possible he liked to overpay. That is one of the reasons why he had no compunctions about firing a man—he knew that the man, with the extra salary, would be sure to be in funds.

He had no standards for selecting men, and although he had many rules by which the departments were supposed to select their men for promotion, he observed none of them himself. He picked men for high places from without the organization as well as from within—excepting that in the ten years or so before his death he did not go

outside the company for men to promote. His ventures in hiring stars were all failures and the men who really helped him make the company were all men who had come up through the ranks. They attracted his attention in various ways—some because their duties threw them in contact with him; others because they just happened to do something which drew his attention. Once you had drawn Mr. Patterson's attention you either got a promotion or got out. And being under his eye was no easy affair, for then you would get orders.

Getting an order from Mr. Patterson was a test of your discretion—you had to discover whether it was a literal order to be carried out at once or merely a try to see how you would act. In short, Mr. Patterson's personal methods with men defy explanation; they are a mass of contradictions, just as the man himself was a mass of contradictions, but the outstanding principles are his urging forward at hectic pace and his policy of meetings.

Out of the meetings came the pyramid system of organization and the teaching through the eye, all of which are absolutely original with Mr. Patterson and at the very backbone of his success in getting hard, coördinated work out of men. And back of all is the famous Suggestion system. As has been noted many times before in this book, Mr. Patterson was an adapter rather than an originator. His genius for adapting was such that the result amounted to a new idea in its application, and indeed I have just spoken of several ideas as being original with him. What he did was to take an idea out of its setting, put it into his own setting, and then change it about—the origin got lost.

It was so with meetings; Mr. Patterson, as soon as he made a decision, as a rule began to doubt its correctness

and he would at once consult with others. Sometimes—this was at the very beginning of the business—he would want to talk over plans before putting them into effect. He talked over almost everything with his brother, he talked over shop affairs with the men, and, as has already been described, he quickly began to hold conventions of salesmen in order to talk over sales methods.

At the convention of 1886 he was trying to illustrate a point with his hands when it suddenly struck him that he could make his point the more clearly in school fashion with a blackboard. He sent out for a blackboard and thereafter he never held a meeting without a blackboard on which to draw a diagram of what he was talking about. Out of this grew the whole theory of teaching through the eye—a theory that ran through everything which Mr. Patterson did. Describing it, he once said:

"One day years ago, in the Dayton high school, the school board paid us a visit. It was an occasion when we were all expected to make our best showing. The teacher told me to explain a rather involved calculation. I asked if I might use the blackboard—my first teacher had taught me from the blackboard. Instead of merely putting down the figures, I drew a diagram and from it explained how the results came. In effect, I dramatized the problem. It was all very simple, and I adopted the graphic method only because I had found that I could understand things better and talk about them more clearly if I had something concrete before me. My demonstration was the hit of the day.

"Later I taught school in the White Mountains. I found that the pupils understood even the most difficult problems if I drew both the right and the wrong way side by side on the blackboard and then told why the one was

correct and the other was not. They did not forget the two contrasting pictures.

"Those incidents are at the base of my whole system of business teaching; they are the foundation of its main principles:

"'1. Teach through the eye.

"'2. Contrast the right with the wrong way.'"

And here is his own description of his full method—a method which is to-day used in many quarters and which goes through everything that the N. C. R. undertakes:

"Business is only a form of teaching. You teach people to desire your product; that is selling. You teach workmen how to make the right product; that is manufacturing. You teach others to coöperate with you; that is organization. To succeed in business it is necessary to make the other man see things as you see them. I say 'as you see them'—which means that you yourself must first see and believe before you can tell another. I have been trying all of my life, first to see for myself, and then to get other people to see with me. The measure in which I have succeeded is the measure of the progress of my company. The methods which I shall set down here are those which have proved best with me—and I have tried many ways.

"One of the many advantages of teaching through the eye is its exactness. Accuracy comes to me as a heritage from my parents and grandparents; one of them was a surveyor and all were brought up in the school of Scotch precision. I like to be definite. I have often heard a speaker ask, 'Do you see my point?' He wants to know if the hearer actually has the point in eye as well as mind, that he understands it well enough to make a mental picture. Well, then, why not draw the picture? In-

stead of asking if the point is seen, why not draw the point so that it cannot help being seen?

"An argument is good according to the amount of the dramatic which it contains. Of course the particular situation limits the dramatization, but I have found that words, whether written or spoken, without some kind of drawing on which to centre attention, are not effective.

"The very first advertising that we put out after starting the N. C. R. taught me this lesson. I had some five thousand circulars printed describing the new machine and what it would do. I told what it had done for me and how it could prevent business leaks. It was a good circular, but it did not contain a picture of the cash register. Having put the envelope into the mails, we hurriedly hired two extra men to answer inquiries. We waited, and we might be waiting still, for we did not get a single inquiry. Nobody knew what we were talking about!

"It should be self-evident that you cannot convince a man if he does not know what point you are trying to make—if he is thinking of something different from what you want him to think about. And it is right here that the spoken words fail, for not only is it not enough in itself to hold attention, but there is no certainty that your hearer takes the same meaning from the words that you intend to convey. Very few people understand words. The uneducated man, for instance, may have only a local and limited meaning for a word which brings up dozens of ideas to the more educated man. Take a very simple instance. 'Food' to a baby means milk or, at the most, two or three articles; 'food' to a labouring man has a somewhat broader meaning because he is accustomed to a wider variety than an infant; but 'food'

to a chef calls up thousands of delicacies prepared in many different ways and as something primarily to prepare rather than something for himself to eat.

"In order to confine the subject, to make sure of what is under discussion and to nail down the points as made, I evolved the pyramid form of diagram. Here is how it works. First I draw a triangle and label its apex with the point I intend to make. I start with the conclusion so that there can be no mistake as to what I am about. The conclusion is the result of certain other secondary conclusions or facts. I find that most ideas divide themselves into five parts, which is a particularly convenient number, because in speaking of the parts it is possible also to use the five fingers of the hand to check off the points as made. Therefore I divide the base of the triangle or pyramid into five divisions and at the head of each division write its name. The sum of the divisions is the main conclusion which is to be proved. Naturally, each of the five sectional conclusions is composed of certain facts or leading-up arguments. I list them in columns under the subheads. The result is a structure of five pillars of elemental facts each supporting its capital fact. On the capitals rest the pyramid, at the apex of which is the conclusion. It is all a simple process of analysis.

"How does this pyramid help a talk? Take a concrete case. Suppose you want to have your employees take better advantage of their opportunities. I make a pyramid headed: 'Ways I Can Improve Myself,' 'I Am a Member of the Double-Up Club,' or give it some other title that states the object which is to be attained. The end is to be reached through the man bettering himself simultaneously in a number of ways. These ways are the natural divisions of life and are five: Physical, Mental,

Moral, Financial, and Social. Under each of these five columns I list the things to be done; that is, if a man improves on all of the points listed he is greatly helped in striving to attain the object set out at the head of the table. I simply put down in black and white in a logical diagram the various things to do for self-improvement and to attain the very desirable end which heads the diagram as an object. I take out all speculation as to right or wrong and show the man what he may gain by absorbing the principles. The conclusion also answers the eternal question: 'Where do I come in?'

"You can convince yourself by these methods and you can convince others so thoroughly that they will go out and convince the public.

"It also has many other uses. For instance, you can diagram the functions of a department or an individual. Any subject is the better for being set out in this kind of half geometry and every element of doubt is removed. In each department we have cabinets containing charts showing the scope and the duties of the department, the head, and his assistants. Every report is thus pyramided and, if it is of a permanent nature, it is printed on cardboard and swung into the cabinet. The entire information concerning the activities of any department hangs in its meeting room, and one has but to swing out the proper panel to know in a moment what has been done and what is under way. We reduce everything to its important facts and put it up on the wall.

"One of the first articles of furniture that I bought was a blackboard on which to make these demonstrations; eight or nine years ago we substituted great pads of paper mounted on artists' easels and now every discussion on every subject goes forward pictorially as well as orally.

When we decide on anything we post it up as settled and go on to something else.

"The pyramid is only one of the various ways of putting over the idea or of holding attention. Another is the caricature. Little grotesque drawings are wonderfully effective. I have a whole system of cartooning or 'chart talks.' A circle with a dollar mark means a piece of money, a bag marked with a dollar is a lot of money. Many good effects can be had with moon faces. Draw a circle, put in a few dashes for the eyes, nose, mouth, and ears. Twisting these lines gives the expressions; the out-of-date man has the corners of his mouth down; the chipper, up-to-date fellow has the curves up. The drawings are homely, but the most effective cartoonists are not the men who make the prettiest pictures; the thing is to express the idea and the contrast.

"The big bag and the little bag of money, side by side, are the natural heads for the right way as opposed to the wrong way; the one brings much money, the other little money. If you sketch these rapidly as you talk, there is no danger of people letting their minds wander; they are bound to look at what you are doing and thus to go with you through the successive stages to the point you want to make. And again the funny figures put people in good humour.

"I hold that one cannot rely on speech alone to make himself understood or to gain and hold attention. A dramatic supplement is needed. It is better to supplement whenever possible with pictures which show the right and wrong way; diagrams are more convincing than mere words, and pictures are more convincing than diagrams. The ideal presentation of a subject is one in which every sub-division is pictured and the words are used only

to connect them. I early found that in dealing with men a picture was worth more than anything I could say. I used to employ an artist to hang around in the shops with me and quietly make sketches of things that were not being done right. Then the sketches were made into drawings and I called the men together and showed them exactly what they were doing. When I heard of the stereopticon I immediately bought one and projected the drawings on the screen, which of course made them even more effective than on paper. Then came the moving picture. I think that I had one of the first machines ever made and now we have a big department and many motion-picture films, and more than 60,000 coloured stereopticon slides.

"I have spoken of dramatic effects. They are not the result of chance but of study, and must be either lifelike or caricatures. There is no betwixt and between, for that will not hold attention. I have often acted through the parts in a regular drama—a real play composed to bring out some point—with the other executive officers of the company taking leading parts. When I want to teach a group of salesmen the proper approach and the demonstration, I have a grocery store or some other kind of store fitted out in detail. The grocery store has real goods on its shelves, the shoe store contains real shoes. A grocer gets a better idea of what you are doing if he finds that the can of tomatoes on the shelf is one such as might be found in his store and not a mere dummy. A playlet given two years ago in which I took part as a salesman gave the approach, demonstration, sale, and installation of our then latest-model cash register. I played it because I had discovered that the agents were getting away from the fundamentals of salesmanship. It started with the

evolution of a store, the call of the assistant to the sales agent, the visit of the sales agent, the demonstration, the call of the merchant and his wife with the agent on the banker and then on the indorser of the note with which he proposed to borrow the money to pay for the register, of their visit to the landlord for improvements, and so on through every event which would be apt to happen in the sale and installation of a register. That was so effective that we had it made into a film for teaching purposes.

"The dramatic points do not come by accident. If every man trying to put over an idea to one man or to 10,000 would study his setting, he could achieve the interest-holding moments.

"Once when I found an audience of agents getting away from me, I held up a ten-dollar bill before them, tore it to bits, and threw it on the floor. The people sat up, and then I said:

"'Did you think that I was going to waste that bill? I was only trying to show you what you were wasting by not giving attention.' Turning to an assistant, I continued: 'Just pick up the pieces of that bill and paste them together.'"

CHAPTER XV

MORE OF MEN AND METHODS

THE impromptu meetings in the factory shortly became regular fixtures, just as the conventions of salesmen became a regular fixture, but they were not considered of high importance until suddenly a large shipment of rejected registers came back from England—all defective. The registers did not add correctly, and a register which will not add correctly is something worse than useless. Then, as has been described in the chapters on the factory management, the revolution began in the factory.

Mr. Patterson moved his desk out among the machinery and at once he began in his characteristic way to work through the men toward the product. He began to call meetings of the foremen and job foremen. He held them in the "Schoolhouse under the Elm" where the sales school was held. He went beyond the calling together of department heads and began to hold meetings of the whole factory force in an abandoned Jewish synagogue at the corner of Fourth and Jefferson streets. There he taught what good work would do and what waste would do. And he taught through the eye. He had stereopticon slides made, and long before motion pictures had been invented the N. C. R. possessed slides of every important operation in the plant as well as slides picturing all the steps in the progress of the company. Mr. Patterson

was probably the first to take up the industrial use of the motion picture.

Exactly as the salesmen were taught to sell, so the people in the factory were taught to work—and the reason for working. And in the synagogue began the idea of holding night classes so that the employees could learn how to get better jobs for themselves. The whole atmosphere gradually became one of teaching and as such it continued—with the N. C. R. as a university and with every executive and employee, from Mr. Patterson down, as students.

The first formal organization for factory work was known as the Advance Club which was shortly changed into the Progress Club. This club met every Friday from 10:30 A. M. until noon in the chapel and every foreman, every head of department, and every executive was expected to be present. When Mr. Patterson was in Dayton, he presided, and the programme was printed in advance with the five most important subjects for consideration put in capital letters at the head of the list. Every subject connected with the welfare of the company came before these meetings and the members were expected to have opinions—for one of Mr. Patterson's favourite schemes to compel attention was suddenly to pick out some member who did not look interested and ask him for a full opinion on the subject under discussion. And often when a meeting closed he would ask all present to fill out slips telling what they had learned at the meeting. More than one executive has parted from the company because he could not understand why the meetings were important.

These Advance Club meetings gave a common ground between the factory and the office and sales forces and

A DISTRIBUTION OF PRIZES IN 1921

Following a dinner given to 4,000 people, consisting of prize winners at the N. C. R. plant and members of their families

J. H. BARRINGER
First vice-president and general manager of the National Cash Register Co.

also they gave Mr. Patterson his first idea of what was really wrong with the system of organization. He drew a pyramid showing the company's activities and he said that the pyramid was resting on its point instead of on its base—that the whole organization was resting on him whereas he ought to be on top directing the organization, and every man in an executive position should be on the top of his own pyramid and in control of it.

That gave Mr. Patterson the new idea of deliberate delegation of duties; the old idea of business was that the executive should delegate to others only that for which he could not find time himself. The new idea of Mr. Patterson's was that an executive should do only what he could not delegate—that the chief business of an executive was to think and to plan. Hence his motto:

"Never do anything if you can get someone else to do it."

He carried out this principle literally; often he would drop into a department and ask the head:

"Who would look after your work if you were away?"

Perhaps the manager would hesitate; then Mr. Patterson would come back sharply with something like this:

"You are away now. Stay away for a few days and see what happens. You are not hired to manage this department. I can hire a manager for five dollars a week. You are hired to think and to act as a buffer."

Once, just to test this theory, he took out ten or twelve of the most important executives in both office and factory. The machine ran on just as before.

This is the reason why Mr. Patterson himself was able to spend so little time in Dayton and the reason why all the more important executives have always been able to

spend more of their time out holding conventions through the country or in Europe than at their desks in the office. It was Mr. Patterson's conviction that any executive worth paying a high salary to ought to be more useful gathering ideas than administering details. This is not to say that the men were not expected to know every detail—it was simply that they were were not expected to administer the details. Mr. Patterson himself knew every detail. When he landed at San Francisco from a two-years' trip around the world, the first question he asked of the general manager—full of important topics —was:

"Have the roots of that big tree been fed?"

He once drew up his principles of management as applied to the N. C. R. and they are of general interest and application, for they really have in them nothing essentially peculiar to the N. C. R.

"1. An organization should have but one head. Centralized authority means no red tape, no delay in making decisions. An army cannot win victories with divided authority. The same thing is true in business. There must be someone to lead, to decide, to be the head. Every business needs a leader.

"2. Everything is done to keep things moving and save time. Nothing is so valuable as time. Materials are carried from one department to another on trucks. Modern electric trucks have replaced those dependent upon man-power. This saves time and labour and enables us to keep so many people busy in useful work.

"3. This company has found that it pays to have best working conditions. Employees are entitled to decent, comfortable surroundings at their work. What is done is but justice. The more we do for our employees, the

better work they can do. The more they do for the company, the more we are able to do for them.

"4. Much of the work in this factory is done with the aid of machinery. Improved machinery has enabled us to do many things more quickly and better than they were done in the past. It enables us to pay high wages and still sell our cash registers at such low prices. Machinery makes men dear, their products cheap.

"5. That business is best which requires the least attention from the head. The pyramid plan of organization is used at this factory. Everyone has certain duties and responsibilities. This permits the management to give a part of their time to planning for the future.

"6. Time off because of sickness is the same as money lost by the employee and the company. Surgeons, doctors, and dentists help keep N. C. R. employees well. They look after injuries, sickness, bad teeth, and carry on a campaign of health education in the factory and in the home.

"7. When a few men try to carry the entire load the business suffers. It does not progress as it should. When everyone shoulders his part of the responsibility it is much easier to go ahead. Great tasks can only be accomplished by the assistance of all parts of an organization.

"8. Fifty thousand persons visit our factory each year. They see how cash registers are made, the people who make them, the good materials used, the improved machinery, and our welfare work. These visitors tell the world about the N. C. R. and our product. This helps to sell more cash registers.

"9. The best way to teach is through the eye. It is hard to retain what we hear, but a man remembers what he sees. The nerves from the eye to the brain are twenty-

two times as strong as the nerves from the ear to the brain. We get 87 per cent. of our education through our eyes.

"10. Our Test Department carefully examines the materials used to make National Cash Registers. We believe that nothing is too good for the merchants in all parts of the world who use these machines. Each register is rigidly inspected several times as it is built.

"11. We found that people do the best work when they are best cared for. Nothing is more important to workers than good food. Three dining rooms are operated for our employees. Warm, substantial, well-cooked meals are furnished at cost, and often less than cost.

"12. Much of the growth of this business is due to the constant improvement of our product. For thirty-six years every effort has been made to make National Cash Registers meet the needs of merchants in all parts of the world. We are never satisfied, but are always trying to improve.

"13. Untidiness causes a great waste of time and lowers the morale of employees. Carelessness means poor workmanship. It reduces profits and delays wage increases. Both workers and owners pay for it. Keeping things in order saves time and adds to the efficiency of the entire organization.

"14. Workers are entitled to decent and comfortable surroundings at their work. Good working conditions keep workers healthy and happy and add to their self-respect. No employer can afford to provide work places that injure the efficiency of employees. When workers are contented they do more and better work."

As the years went on, the idea of meetings grew. The little chapel was christened "The House of Usefulness"

and out of it sprang many clubs. A little building near by was taken over as an officers' club, where all the officers of the company met daily for luncheon to talk over affairs and sometimes to hear speakers from the outside. "The House of Usefulness" became too small for the meetings and the attic of Building No. 1, which had been fitted as a dining room for women employees, was used as a meeting place. Then the east end of the building was turned into a lecture hall—"Advance Club Hall." When Building No. 3 was finished, part of it was turned into a large schoolroom—an unheard-of idea at the time. Many manufacturers inquired whether Mr. Patterson was running a business or a school. His invariable reply was:

"Business is only teaching."

Next, in 1905, came "Welfare Hall" which was primarily a dining room for the whole force. Changing the hall from a dining room into an auditorium was inconvenient, so Mr. Patterson decided to build a "schoolhouse." He completed the first building in 1912 in the form of a Greek temple, carrying out the pyramid idea in the façade. That building seated four hundred and fifty and before it was completed it proved to be too small. It was enlarged to hold more than a thousand people, but still it was too small, and just before Mr. Patterson's death he had work started on an almost complete rebuilding to double the capacity, and the result is perhaps the finest theatre building in the country. It is known simply as "The Schoolhouse," but it is the centre of every sort of activity from sales conventions and addresses by prominent visitors to concerts on the fine pipe organ. Every day at the luncheon hour a motion-picture show is given, which is free to any one who cares to enter. No admission is ever charged to N. C. R. entertainments and attendance

at them is never restricted to employees. But more of this in another chapter.

On every subject that came up Mr. Patterson held a meeting. He had an amphitheatre fitted up in the administration building for small meetings of, say, less than fifty people. He would call the factory men into advertising meetings and the advertising men into factory meetings. Whenever he had an idea he wanted to test out, he called a meeting, and invariably when the men summoned had assembled his first question was:

"Who else ought to be here? Who else could learn something here?"

And then he would send out a few more summonses—for summonses they were. A man had to drop whatever he was doing and come.

Out of the plan to hold forth rewards for thinking came the suggestion system for the factory force, the profit-sharing plan for both the factory and office, and the famous Hundred Point Club for the salesmen. The suggestion system was another of Mr. Patterson's new ideas and it is best described in his own words:

"You do not get full value out of the wages and salaries that you pay unless there is a return in addition to the number of hours spent in actual labour at specific tasks. I might almost say that full value is not received unless each employee is in that critical and yet appreciative frame of mind which makes for close observation of defects and which leads him to think what he would do if he were a manager, a head of a department, or even the president of the company. You must have that employee's ideas as well as his time.

"An organization, of course, is essential in a business of any size, because without it things will not be done;

but the big striking defect in an organization—and it becomes more and more glaring as its size increases—is the restriction of ideas to a comparatively few people at the head. When you employ five, ten, twenty, or even one hundred men, you can, and will if you are wise, know each of these men intimately. You can get their ideas and also learn to size them up.

"Then you will not only have in mind the men who are ripe for promotion, for the assuming of greater responsibilities, but also you will have a hundred-headed brain, for you should be able to gain at least one idea from each of these hundred men.

"Of course if you do not care for ideas that is another matter, and in such case it might not be a bad scheme to quit business and go bury yourself. As my own business grew, I found greater and greater difficulty in finding out what the men were thinking about and what they would do better if they had a chance. I recognized that I was throwing away an enormous asset.

"I was depending solely for ideas upon myself and upon the comparatively few men about me, and I had no means of knowing who were the bright lads scattered throughout the organization. That is, I was not only throwing away the brains of about five thousand people, which should have been concentrated in making business better, but also I was restricting advancement to accident or length of service.

"When the business was smaller I used to travel about through the shops a great deal, knowing everyone, and taking pains to ask them if they had anything to suggest. Then I had them in meetings and I called for suggestions, but a person unused to speaking will often be too embarrassed to make a suggestion in meeting.

"The subject bothered me because I felt that I was losing ideas, and if there is any one thing more than another that I do want in ever-increasing quantity it is ideas. One day, now nearly twenty-five years ago, going through the foundry I ran across a man cleaning castings. I knew him as one of my really good employees in the coal business some years before. I knew he was too good a man to be cleaning castings, so I asked him:

"'You used to have a lot of ideas—why don't you make a few suggestions to your foreman and get a better job?'

"'I would like to,' he answered, 'but what is the use? Nothing that I said would ever get beyond the foreman.'

"He was right. I had not realized that a series of walls had been built up between me and the workers; that those immediately below me had a wall that shut off ideas from the department heads; that the department heads had another wall that shut off the foremen; the foremen had one for the sub-foremen; and they had still another for the workmen. A man at the very bottom would, in the ordinary course, have needed the agility of a Rocky Mountain goat to have reached me with a good idea.

"Now, this was no fault of the foremen or of any of the subordinates because it is perfectly natural that a man whose whole duty is the carrying out of orders should not welcome suggestions that might result in the change of a system to which he had become accustomed. And there is also the additional fear, held by so many men down the line, that if a fellow under him is too good he will get his job. This is a wrong but a perfectly natural attitude.

"Out of this incident grew the suggestion system which has grown and grown until in one year some 3,200 suggestions were submitted and 42 per cent. of them were

adopted. Right at the beginning arose the question of how best to get at the suggestions and whether or not to include complaints against prevailing practices upon the same basis as ideas for improvements.

"We decided that a complaint was truly a suggestion leading to an improvement, and therefore to-day both complaints and suggestions are on the same basis. We placed all over the factory suggestion boxes in which any member of the organization might place his idea and we gave one dollar apiece for suggestions or complaints. This did not work out well, for, although it gave us somewhat of a line on who were the best employees, it did not discriminate enough between values, and step by step we worked out the system that is in force to-day.

"We have substituted small automatic registers for the suggestion boxes, so that the employee writes his suggestion, tears off the slip, and the carbon is contained in the machine. It is a protection to the employee and also prevents the possible loss of the small slip. More elaborate suggestions may be submitted on blanks provided for that purpose.

"Instead of paying for a suggestion we found that greater enthusiasm was aroused and more suggestions offered by making a contest. We have two contests in each year, one ending June 30th and the other December 31st. Twelve hundred dollars is offered in 128 prizes; the best suggestion adopted receives $100, the next $75, the next $50, the next $30, the next three $25 each, the next six $20 each, the next thirty-five $10 each, and the next eighty $5 each. Those are the individual prizes.

"Each prize winner in addition receives a medal and a certificate signed by the president, and the contest is put on a team as well as on an individual basis by award-

ing a banner to the prize department. The points considered in awarding the banner are:

"1. Total prize money of the department.

"2. Number of prize winners.

"3. Number of adopted suggestions

"4. Average prize money per adopted suggestion.

"5. Average prize money per employee in the department.

"The handling of suggestions has now been made a separate department, with a committee composed of department heads to pass upon the prizes. Each suggestion as it comes to the Suggestion Department is read and classified according to the subject with which it deals. It is then acknowledged to the employee, entered upon his record card, and copied without his signature in order that those who pass upon the suggestions may not know who makes them. It is then sent to the proper department for investigation and a report is made.

"When a suggestion is not adopted a note is sent to the employee telling him why it was not good. For instance, here is one that was not accepted:

"'The merchant does not like the method of putting on the ribbon, which necessitates the soiling of his hands with the ink. Should not this be remedied?'

"Answer: 'We supply the merchant with twenty inches of ribbon, which lasts indefinitely. You have to soil your hands in putting on an automobile tire.'

"Or another that was taken:

"'Could I suggest that when a member of the N. C. R. goes into a store not using a National Cash Register he report it to the superintendents as well as to the office?'

"Answer: 'A good idea.'

"If the suggestion is good, it is put into effect as soon

as practicable, and if an employee thinks that his idea was not given the proper attention he may ask for a reinvestigation and one is always made.

"In awarding the prizes, all of the adopted suggestions submitted by an employee are considered together, so that the winner of the first prize may not always be the man who made the biggest suggestion. The winner may be an employee who has submitted a large number of minor suggestions.

"We also found that frequently two or more employees will submit similar suggestions. In that case we credit the idea to the one who first gives it; this is one of the excellent features of the autograph because that determines the priorities beyond question.

"All employees of the company except supervisors, department heads, foremen, job foremen, section heads, and sales agents are eligible for prizes, and each employee is furnished with the complete rules and instructions. We ask for help from them on all divisions of the business and most particularly as follows:

"(a) Increasing coöperation.

"(b) Improving the quality of our work.

"(c) Decreasing the cost without decreasing the daily wage and lowering the quality.

"(d) Eliminating unnecessary and duplicating work.

"(e) Better plans for shop work.

"(f) Increasing the sales of our product.

"(g) Improving blank forms.

"(h) Improving the health of our employees.

"(i) Additional safety precautions to make the work less dangerous.

"(j) Using cheaper tools and operations to accomplish the same result.

"The cash value of the suggestions has been enormous. It is impossible to say what they have amounted to since the beginning of the business, because some new plan which may have saved in operations two years ago may not be in use to-day because that particular thing is not being made. Therefore the saving is not quite a cumulative one, but I may say that most of the mechanical improvements in the cash register of to-day are due to suggestions from employees.

"Take a typical six months. The number of suggestions received was 3,536; the number of suggestions adopted was 1,317 or 37.2 per cent. scattered among 587 employees. Of these 128 received prizes. Of the adopted suggestions 68 were such that the dollars-and-cents saving could be figured and that saving amounted to nearly $15,000 a year.

"The suggestions cover the entire mechanical and selling operation of our business, and although I regard the financial gain as highly important, I do not think that it is anything like as important as that other gain which we cannot measure in money—the bringing of men with ideas to top positions in our organization. In all the important offices we want men with ideas rather than routine experts, because you can pick up a routine man almost anywhere and practically any one can be trained to handle routine.

"But with ideas it is different. It may very well be that the chap with the most active mind and who will do the most to promote the business will not necessarily be the most expert with his hands. Indeed, the best idea men are not commonly the most expert workmen. I have found that the very active brain does not as a rule seem to go with the superskilled hand.

"The expert workmen are highly valuable as workmen, and with the years they are bound to be recognized, but the idea man may never have his chance if there is not some way of gathering his ideas.

"Each suggestion is entered on a record card containing the name of the employee, and every little while these cards are gone over. I find that the same men and women turn up as prize winners in successive contests and these people then place themselves in line for promotion—and they always get it. Practically every one of our present factory executives and foremen reached his position through making suggestions.

"And, in addition to all of that, the morale of the organization is strengthened and the enthusiasm kept up. The employee is encouraged to observe, think, and suggest, and that alone makes a better man of him. He knows that if he gets into the limelight through his suggestions he is going to get a better job and hence he will have no excuse for saying, 'No matter what I do I cannot get any further along.'"

The profit-sharing plan has been many years in the making and is still in the experimental stage. Mr. Patterson approached wages never with the thought of how little he could pay, but first to see how much he could pay, and then to find what he could give in addition to the wages. The welfare work and the various employee helps were not in place of wages—they were in addition to payments which were uniformly higher than elsewhere paid for the same sort of work. The plan was put into operation for the first time in 1917 and in its final form it operates in this fashion. (The executives under the plan do not receive salaries quite as large as they might receive in other companies of similar size—

their fortunes depend upon the fortunes of the company, but the workingmen have their shares over and above the highest going wages.)

The profit-sharing plan provides that, after deducting from the year's profits a sum equal to 6 per cent. interest on the money invested, the remainder is divided equally between the company and the employees. The half that goes to the company is used for buying additional land, buildings, machinery, inventions, and similar expenditures necessary in an expanding business. The company takes all the risk; the employees take none; but every increase of efficiency or elimination of waste on the part of an employee is reflected in the amount of the profits in which he shares.

"The amount invested by the company is determined by deducting all indebtedness from the valuation of buildings, land, equipment, stock, outstanding accounts, etc. Thousands of dollars' worth of patents and 'good will' are not included as part of the investment.

"Three distributions of the profits are made to the employees each year. Upon the conclusion of the first six months of the year a conservative estimate of the profits is made and the money distributed to the employees. This is repeated on the last of December. After the actual profit for the year has been determined by an outside firm of accountants, distribution is made of whatever profits remain.

"The profits are not distributed equally to employees regardless of the importance of their positions. One half of the employees' share, or 25 per cent. of the total profits, is given to the managing employees, including executives, department heads, and their assistants, of which there are approximately 600. The remaining 25 per cent. is

divided between all other employees in the office and factory, with the exception of those who have been employed less than thirty days.

"In other words, the employees are divided into four groups: Group A, containing 35 or more executives, receives 12 per cent. of the profits. Group B, containing 100 or more department heads and foremen, receives 5 per cent. of the profits. Group C, containing 400 or more assistants to department heads and job foremen, receives 8 per cent. of the profits. Group D, containing 5,000 or more employees not holding positions of authority, receives 25 per cent. of the profits. Group E consists of new employees, who do not receive any profits until they have been in the employ of the company for thirty days. All profits distributed among employees of any group are in proportion to the wages or salaries received for the six-months' period.

"This dividing of employees into groups is done on the theory that those who contribute the most to the making of the profits are entitled to the largest share in them. The Group D employee, being responsible for his own work alone, does not have it in his power to contribute as much in increased efficiency and economy as the department head who is responsible for the work of from fifty to a hundred men.

"Under this plan, not only do all employees, from the general manager to the messenger boy, have the incentive to do their best in their positions and thereby earn more profits, but the employees in the B, C, and D groups have the added incentive to advance into a higher group."

And finally there is that most famous of all the Patterson institutions—the Hundred Point Club. In the early days all the salesmen came to Dayton for the annual

conventions, but as the sales force grew larger this plan grew less feasible and the practice began of holding conventions out in the districts. But it seemed advisable that at least a certain number of salesmen should meet at Dayton each year so that the sales force and the factory should keep in close touch. Mr. Patterson hit upon the plan of making the trip to Dayton a reward for merit. As has already been explained, each sales district and each regular salesman has a yearly quota of points—a certain value of cash registers that he is expected to sell. That gave a method for working out the reward.

The men who sold their full quotas were designated members of the Hundred Point Club and invited to Dayton for the annual convention. The man who first got his quota in the year was the president of the club, the second man was the vice-president, and the third was the secretary, and the fourth was the treasurer. Thus evolved a unique organization of best salesmen, and each year since its inception the club conventions have been growing in importance until they now are the event of the Dayton year.

The men are entertained at the expense of the company, and the convention lasts as a rule one week. These are days of hard work, with meetings morning, noon, and night on company policies and the best sales methods. Usually the sales point of the year is presented through a playlet or tableau in which the officers of the company take the leading parts, and such has always been the atmosphere that the men have gone away resolved to make new sales records—and usually made them.

During the latter years of Mr. Patterson's life the conventions became more elaborate, winding up with an excursion to New York at the company's expense—all in

G. H. WARK

The European manager at Berlin, in charge of the Continental business of the National Cash Register Co.

A MEETING IN ADVERTISING

With John H. Patterson in charge. "He made little dramas of everything he wanted to teach—sometimes presenting them on paper and sometimes on an actual stage."

line with Mr. Patterson's policy of trying always to have the N. C. R. do more for those who work for it wholeheartedly than any other company had ever thought of doing for its people.

For that was Mr. Patterson's way with men.

CHAPTER XVI

FOREIGN BUSINESS

THE cash register is the first American machine which can claim that on it the sun has never set. Most noteworthy American inventions have been firmly established at home before ever they went overseas, but the cash register started out into the world almost at once, and while Mr. Patterson was struggling in his little shop, registers were being sold in England and Australia. And to-day, although there are not so many cash registers out in the world as there are petroleum tins, yet it is hard to find a city of a thousand people anywhere in the world—even in the heart of the Orient—that has not at least one cash register, although it may be of an ancient vintage.

And with Mr. Patterson's nature, a world-wide distribution was inevitable. For he looked on the world as a whole—that which was good for an American storekeeper was equally good for an English or a Chinese storekeeper. It made no difference to him that the foreign storekeeper might think otherwise—he expected him to think otherwise. And thus, having no limitation on the scope of his machine, he saw no limitation on its market. The reason for the foreign business will be found in Mr. Patterson's mentality—and always he gave it his personal attention. Not only that, but he insisted that the executives of the company be as familiar with Europe as with the United States.

The first agent abroad was William Parnall, appointed for Bristol, England, on March 19, 1885. He sold only a few machines. The first really active agent was J. W. Allinson and a letter which he wrote on June 9, 1885, is among the historic documents of the company. Here is the letter:

June 9, 1885.

To The National Cash Register Company
Dayton, U. S. A.

Gentlemen:

When I first saw one of your Self-adding Wheel Cash Registers at Hannah & Hoggs when in Chicago in Feb'y last, I was so impressed with its utility that, as you know (after ascertaining whether they could be adapted to the currency of this country), I ordered one, which has duly arrived and more than answers my expectations, the only regret being that I had not seen and had one here years ago.

For a day or two mistakes occurred, owing to carelessness, etc., but my people and the "machine" as they term it now, thoroughly understand each other and there is but one opinion—that despite the insular prejudice to "Yankee Inventions" they are bound to come into general use in this country.

A Cash Register is indeed "invaluable to every business man."

Yours truly,
J. W. Allinson.

In the early years the foreign business was not organized—agencies were just given and the men sold as and how they liked. Some of the agents were foreigners who had never been to Dayton and knew nothing of the company's methods; others tried to sell in the American fashion. But in general they had no training. Some of their experiences were quite amusing, for introducing the register in Europe was no child's play—the price alone was almost prohibitive. For instance, take a note written by Mr. Patterson in 1893 on the N. C. R. in Germany:

"Mr. F. A. Müller is having no easy time of it in Germany, as his letters show. It is uphill work selling cash registers in that country of conservative people, and a less ambitious and enterprising man than Mr. Müller could not have made any progress at all.

"That gentleman meets with some very funny experiences. For example, he attended a meeting of druggists some few weeks ago and gave them a lecture on the cash-register system.

"'I was introduced by the chairman,' said Mr. Müller, 'in the following language: "This is the gentleman who is introducing a new patented American medicine that regulates the liver of an unhealthy business, builds up hope for the chronic grumbler of dull trade, and protects the heart of success against the spasmodic contraction of errors. Fifty thousand business men have tried this medicine, and not one has been known to die of business failure."

"'I bowed my acknowledgments and rattled off my speech in Crane-like fashion, seated myself, and waited for the applause. Up jumped a man and started in on a long harangue about the bad features of the machine. He denounced it in the strongest terms; said it was an insult to clerks, an indication that the storekeeper considered them dishonest; in fact, branded them as thieves; said the price was outrageous, and wound up by stating that it was a bare-faced swindle and not worthy of support.

"'That was a stunner. I could see the register tablets tremble and the black figures turn white. I arose, minus the cheers, and said that while I was pretty well battered up, yet I respected the speaker for his open frankness and courage (I could have brained him on the spot), as it proved that he was honest. I stated, also, that I re-

spected him for shouldering all responsibility, and told them this:

"'"'Gentlemen, a thief, a murderer, and an insane man are each dangerous, but the most dangerous of all is a conscientious man who honestly thinks he is doing right when he is actually doing wrong."

"'I told them this gentleman had no proofs that what he said was correct. I dwelt upon the number of registers in use, of the great number of testimonials we had received; that I did not go to the meeting with something that had no merit, something that was an experiment; that I felt sure that this body of men, who had been authorized by the Government to mix extracts of life and death, would not judge the machine hastily, and then I went into the merits of the registers as well as I could.

"'I concluded my remarks by stating that under no circumstances would I accept an order for a register then, but that the next day I would call upon a few of them and give them a better understanding of the machine.

"'They all turned to me. The strangest of all was, that the man who was so bitter against me, and who made the damaging speech, was the first to grasp my hand. We wound up with a banquet and I dropped business.'"

Gradually the whole European business was reorganized by Mr. Patterson, and the details of this organization had been prepared by Mr. G. H. Wark, the European manager, with headquarters in Berlin, who has been the chief man in bringing together the Continental business, as has Mr. H. C. Banwell the English business—although both men have coöperated on the Continent. The incidents of the European business would make a book in themselves, but these are the main facts. The most

noteworthy phase is that the European success dates from the inauguration abroad of the methods used in the United States. The agents abroad are trained just as those at home, and an N. C. R. demonstration in Italian is precisely along the same lines as one in English. Mr. Wark's memorandum follows:

"Prior to 1895, the N. C. R. Company's business in Europe was not organized. Various general agencies were appointed from Dayton for various countries, but they did practically no business.

"Only in England, Germany, Holland, and Italy were substantial sales made in the years 1891 to 1895 by the general agents: Allinson—England; Müller—Germany; Van Erk—Holland; and De Giovanni—Italy.

"In the summer of 1895, Mr. Patterson made his second trip to Europe for the purpose of more actively pushing the European business.

"It was also his object better to overcome a possible business depression in America by increasing the company's foreign business. In order to do this, he realized that general agents would never exploit the territories and expand the business in the large countries as would company organizations, and that his selling methods had to be introduced. Thus, on this trip, Mr. Patterson personally laid the foundation of the N. C. R. business in Europe.

"Under his personal guidance, from 1895 to 1914 it developed to an enormous organization, producing nearly one third of the N. C. R. world's business. It comprised 15 agencies in as many different countries, with about 2,500 agents, employees, and workmen—of these 1,000 in Germany. At that time the European N. C. R. organ-

ization was probably the largest of any American concern manufacturing and selling machinery.

"The first change was made in England in 1895 where the General Agent Allinson was cancelled and a subsidiary company organized in London in November, 1895, under the name of 'The National Cash Register Company, Ltd.' In 1895 Mr. C. E. Hall, then manager of the Brooklyn, New York, agency, was asked to come to Europe and act as manager for the London company. In November, 1897, he was appointed manager for Europe and Mr. G. H. Carr succeeded him as manager for the London company.

"In October, 1895, Mr. Patterson cabled to me—I was then manager of the Brooklyn office—to come to Berlin and act as manager for the subsidiary company to be organized under the name of 'The National Cash Register Company, m. b. H.' This company began its work in November, 1895, and the incorporation was completed in February, 1896.

"During his stay in Europe in 1895, Mr. Patterson personally conducted agents' schools and conventions. In one of the latter agents made the remark: 'It's a long time between drinks.' This was used a number of years after by Mr. Patterson to illustrate what kind of agents at that time were representing the company.

"In 1896, the registration of the French subsidiary company with headquarters in Paris was completed. Mr. A. O. Zwick of Cincinnati, Ohio, was engaged in Paris as manager. He was cancelled after a few months' service.

"In 1897 Mr. Patterson made a famous trip, visiting fifty cities in sixty days, situated in fifteen different countries.

"In 1898, the then manager for Europe, Mr. C. E. Hall, was cancelled.

"From the beginning, Mr. Patterson instituted in Europe the company's liberal policies, which have been in force ever since, and he then laid down the principles upon which the European business should be conducted. It was his constant aim to have as leaders for the various organizations natives of the respective countries, and eliminate everything American from the organizations that could in any way be objected to by the natives. Mr. Patterson was thoroughly international and felt at home in whichever country he has happened to visit. He respected and complied with the customs of each country and always impressed upon the leaders of the organizations that they should adapt our business and business methods as much as possible to local conditions. His agents' schools, conventions, and advertising campaigns, which he inaugurated in America many years ago, were copied almost to the letter. Later on, many of the large industrial concerns throughout Europe copied what became known as the 'N. C. R. methods.'

"Mr. Patterson was a strong believer in giving authority and placing responsibility on the officers and employees of the company, and by placing confidence in them he made them self-relying. It was Mr. Patterson who ordered the names of the various subsidiary companies in the different countries to be changed from 'The National Cash Register Company' and be translated into the language of each country; hence the names of the present N. C. R. companies in Europe are as follows:

"Berlin, Germany—National Registrier Kassen Ges. m. b. H.

"London, England—The National Cash Register Company, Ltd.

"Paris, France—La Nationale Caisse Enregistreuse, S.A.

"Vienna, Austria—National Registrier Kassen Ges. m. b. H.

"Brussels, Belgium—La Nationale Caisse Enregistreuse, S. A.

"Madrid, Spain—Cajas Registradoras 'National.'

"Milan, Italy—Società Anonima Registratori di Cassa 'National.'

"Prague, Czecho-Slovakia—National Registrujici Pokladny.

"At various times attempts were made to have American sales agents work in Europe, but all without exception soon returned to America, and the majority of these sales agents made a failure in Europe.

"In 1896, the first international convention of sales agents was held in Dayton, which Mr. Patterson invited ten persons from various countries in Europe to attend.

"From 1895 to 1898, the German organization was the organization that had made the most progress of the Continental European organizations, and it was but natural that the smaller agencies looked toward this large company organization for assistance in selling, repairing, advertising, etc. This led to my appointment as supervisor of the various N. C. R. organizations in Continental Europe. In July, 1909, the second international convention was held in Dayton, to which representatives from nearly every country in Europe were invited.

"During his frequent visits to Europe, Mr. Patterson saw that, after the company's business had advanced to a certain point, it required centralization. He realized already at that time that the Dayton factory was too far away from the European organizations to exercise proper

supervision over them and make necessary decisions pertaining to the European business. Therefore, in 1903, Mr. Robert Patterson, then vice-president of the Dayton company, was appointed manager for Europe, and Mr. D. W. Saxe, who succeeded Mr. G. H. Carr in 1902, manager for England. Mr. Robert Patterson held this position in Europe for nearly three years and then returned to Dayton. During this period the European business made considerable progress. In 1903, the first German factory was started at Alte Jacobstrasse, Berlin. After Mr. Robert Patterson had left Europe, several of the officers of the home company wanted to and finally did divide the European business on the Continent into two groups. The so-called Latin Section was created in August, 1906, comprising the countries Belgium, France, Italy, Portugal, and Spain, with headquarters in Paris. Mr. Doucharme, former sales agent in America, was appointed manager for France, and Mr. E. C. Morse of the Dayton Foreign Department was made supervisor of the Latin Section.

"This organization lasted but one year and was dissolved after it had turned out to be an entire failure, and the company lost a considerable amount of money on the experiment. Again the former plan of organization was adopted with myself as manager for Continental Europe with headquarters in Berlin. At that time the company's business in Europe was managed by the following persons:

"G. H. Wark, Manager, Continental Europe;

"H. C. Boysen, Assistant Manager, Continental Europe;

"A. Rist, Sales Manager, Berlin, Germany;

"Otto Rosin, Manager, Austria-Hungary and Balkan countries;

"J. Vuillaume, Manager, Paris, France;
"Emilio Mora, Manager, Madrid, Spain;
"Enrico de Giovanni, Manager, Milan, Italy;
"J. H. Weigel, Manager, Zurich, Switzerland;
"L. Faquer, Manager, Brussels, Belgium;
"Cord H. van Erk, General Agent, Amsterdam, Holland;
"Emilius Moller, General Agent, Copenhagen, Denmark;
"N. E. Frykholm, General Agent, Stockholm, Sweden;
"T. I. Hagen Company, General Agent, Moscow, Russia;
"Nikos S. Skodras, General Agent, Athens, Greece;
"Philipp Lusgarten, General Agent, Bucharest, Roumania;
"Otto Scheffels, General Agent, Constantinople, Turkey;
"Schischkow & Co., General Agent, Sofia, Bulgaria;
"I. Isailovits, General Agent, Belgrade, Serbia;
"D. W. Saxe, Manager of the London company.

"In 1908, Mr. Patterson came to London and remained nearly two years. He conducted from there his campaign of reducing the cost and selling prices of the company all over the world, which resulted in an increase in sales of 100 per cent. In 1908, Mr. D. W. Saxe, manager of the London company, was cancelled, and in 1910, just before Mr. Patterson returned to Dayton, Mr. H. C. Banwell was appointed manager for England.

"It was in October, 1907, that the new selling method with sales pad was started by Mr. Patterson in our Paris office. At this time, the model stores were also started in our offices in Paris, Berlin, and London. This was putting into effect Mr. Patterson's ideas of teaching through the eye. In the beginning of 1914, Mr. Patterson again visited Europe, and cabled for Mr. Frederick B.

Patterson to come in order to make a trip of inspection of agencies. Mr. Frederick Patterson, together with Mr. Rosin, manager for Austria-Hungary and the Balkan countries, and I made an extensive trip through all of the eastern European countries, including Turkey and Greece. After Mr. Frederick Patterson had returned to Dayton in the beginning of July, Mr. John H. Patterson came to Berlin to hold a convention. He was there when war was declared, and left for America by way of Brussels-London on one of the last trains that left the country during the mobilization. His last words at the station were:

"'Do the best you can!'

"At the age of seventy-five, again Mr. Patterson was one of the first, if not *the first* American business man who came to Berlin not long after the armistice had been signed early in 1919. He wanted to convince himself on the ground of the real conditions. In December, 1919, at Dayton he endorsed the decision of the company to purchase a new factory in Berlin and to manufacture several styles of National Cash Registers."

The European business in detail grew as follows—from another memorandum by Mr. Wark:

"Great Britain—English business began March 19, 1885, with J. W. Allinson as sales agent at Liverpool and Wm. Parnall as sales agent at Bristol, England, his territory being limited to one county, of which Bristol is the seat. December 8, 1886, J. W. Allinson, of Liverpool, was appointed sales agent for the British Isles, France, Belgium, and Holland. On December 22, 1891, Mr. Allinson's territory was limited to Great Britain alone. On November 8, 1895, the National Cash Register Company,

Ltd., was incorporated with a capital of five thousand pounds, with Mr. Chas. E. Hall manager until 1897. Then Mr. G. H. Carr was appointed manager and acted in that capacity until 1902. He was succeeded by Mr. D. W. Saxe, formerly assistant sales manager for U. S. A. and Canada, who acted in that capacity until 1908.

"In 1908, the sales amounted to about 450, with 3,000 points. There were at that time 145 sales agents and 200 employees and mechanics. In 1894, the headquarters in London were removed to 225, Tottenham Court Road, where they are now. On May 4, 1908, the capital was increased to forty-five thousand pounds; on September 1, 1908, it was increased to fifty thousand pounds; on October 1, 1908, it was again increased, to one hundred thousand pounds. From 1908 to 1910, Mr. John H. Patterson personally took charge of the London company. In 1910, Mr. H. C. Banwell was appointed manager for the London company. Since 1915, when during the war it became necessary to restrict the jurisdiction of the Berlin company to the Central Empires, Mr. Banwell was given the supervision of the company's business in Algiers, Belgium, Egypt, France, Italy, Portugal, Spain, and Switzerland. London is now headquarters of the Western Section. The present number of sales agents is 146 and the number of office employees 115.

"SWITZERLAND—The National Cash Register business began in that country on November 13, 1885, with the appointment of A. J. Maas as sales agent for Switzerland. No business was done, the first register in Switzerland being imported by Alexander Kunz, Berne, who purchased it during a trip in America, direct from the factory at Dayton. Mr. Kunz was appointed sales agent for Switzerland on April 16, 1891, but no further business was done

by him. On October 7, 1891, Mr. Anton Waltisbuhl of Zurich was given the agency, but was cancelled again on April 16, 1892.

"The National Cash Register business in Switzerland really began only in 1900, when one of the sales agents in France, Mr. Hausermann, was sent to Switzerland from Paris with headquarters in Zurich. He operated under the supervision of the then manager for France, Mr. G. Peratoner, the Swiss organization at that time being a branch of the French company. Very little business was done until the Swiss organization in 1903 was placed under the supervision of the Berlin company, and Mr. Bing, who had received his training as sales agent in Germany, was given the sales agency of Switzerland. In 1908, Switzerland was made a branch of the Berlin company, and Mr. J. H. Weigel was appointed manager of the Swiss organization, which was formed with a capital of M 50,000. During the war, when the business of the Berlin company was placed under sequestration by the Government, the Swiss company was made a branch of 'The National Cash Register Company, Ltd.,' London, England. In 1917, Mr. Weigel was cancelled and the then bookkeeper, Mr. A. J. Stiefel, was made manager, which position he still holds. Switzerland belongs to the Western Section.

"Spain—The Spanish business was first conducted through Mr. R. Mestre, who was appointed sales agent on June 5, 1886. His territory included Portugal. His contract was cancelled on October 3, 1890, no business having been done. He was succeeded by Mr. O. W. Crous, who had his headquarters at Valencia and acted as general agent for the two countries until 1906. On December 26, 1906, the Spanish business was made a company organization with headquarters in Madrid

and operating as a branch of 'La Nationale Caisse Enregistreuse, S. A.,' of Paris with Mr. Crous as manager. Mr. Crous was cancelled in 1907 and was succeeded by Mr. Emilio Mora, under whose supervision were also the Canary Islands and Portugal, with Mr. Madureira being appointed general sales agent for the latter country. During the war, on October 1, 1917, the Spanish company was made a branch of 'The National Cash Register Company, Ltd.,' of London, England.

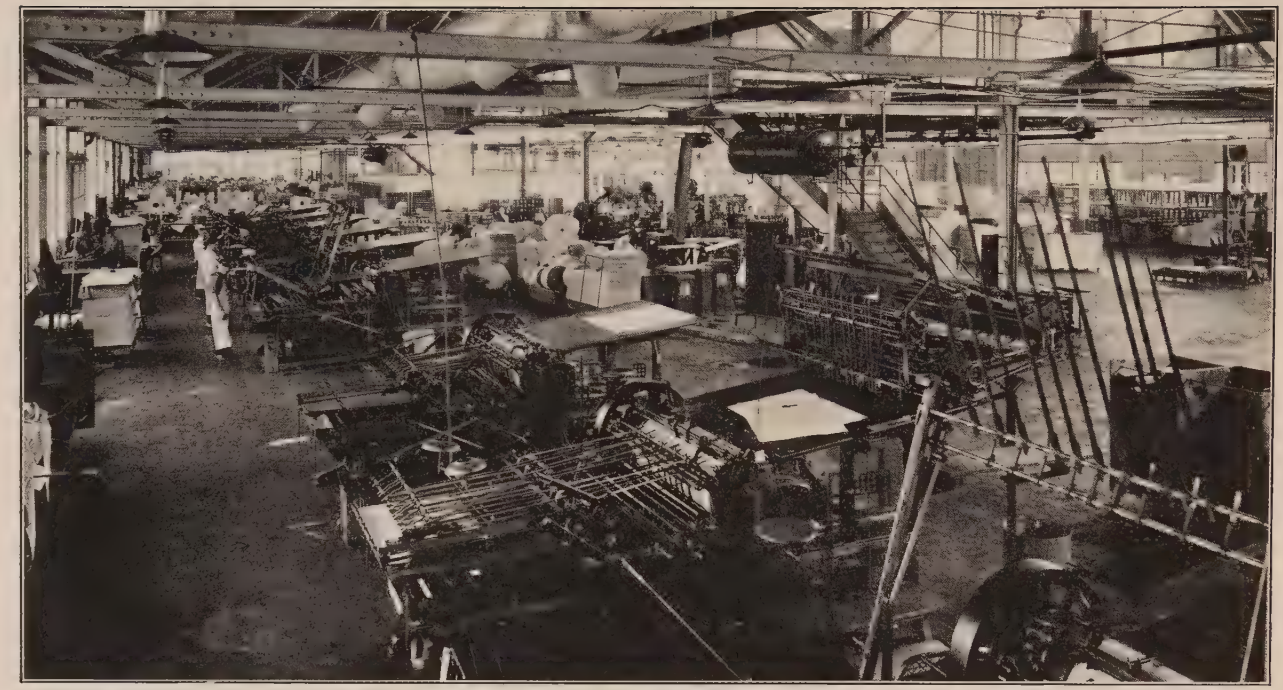
"GERMANY—The National Cash Register business in Germany began September 4, 1885, when A. Kober was appointed sales agent. Practically no business was done. October 16, 1890, F. A. Müller, an American, was appointed sales agent to succeed Mr. Kober. He took two sample machines with him from Dayton to Berlin. On May 20, 1891, Mr. Müller's territory was extended to include Austria-Hungary and Russia. From 1891 to 1895 about one thousand registers had been sold in Germany. Mr. Müller's contract as sales agent was cancelled in November, 1895. The business in Germany was then conducted as a company organization, the incorporation of which was completed in February, 1896, under the name of 'The National Cash Register Company, m. b. H.,' with Mr. G. H. Wark as business manager. The capital stock was M 200,000. At this time the Berlin company's headquarters, executive office, and salesroom were at the corner of Friedrich- and Kronenstrasse.

"In 1903, the first European factory was started at Alte Jakobstrasse, Berlin, and the Berlin company was granted the exclusive right to manufacture National Cash Registers and to use all patents in Europe. In 1903, the Berlin company became the headquarters of all N. C. R. organizations in Continental Europe, and Mr. G. H. Wark was

manager for Continental Europe. On May 4, 1908, the name of the Berlin company was changed to 'National Registrier Kassen Ges. m. b. H.' On December 19, 1911, the factory was moved into larger quarters to Hallesches Ufer 12/13.

"In 1914, the German organization was made up of one thousand persons, of whom two hundred and sixty were sales agents and the remainder employees, travelling mechanics, and workmen. The monthly sales amounted to about 1,200 registers with 11,000 points. In 1914, at the outbreak of the war, the jurisdiction of the Berlin company was restricted to the Central Empires. On October 1, 1918, the Berlin company had to give up its premises at Hallesches Ufer 12/13, and moved into new quarters at Kronenstrasse 24 with the executive office, while the factory moved to 10a, Kopenickerstrasse. In November, 1917, the Berlin company was placed under government control, and from January 14th to February, 1919, was put under sequestration, Dr. Edward Simon being appointed sequestrator. In the beginning of 1919, right after the war, the German organization comprised 92 sales agents, 62 travelling mechanics, 100 employees and workmen. On October 26, 1920, a new plant was purchased at the corner of Werra- and Thiemannstrasse, Berlin-Neukollin, into which our executive office moved on January 23, 1922. On October 26, 1920, permission was obtained from the German Government for the import of tools for our Class 1,400 registers; and in February, 1922, the first Class 1,400 machine was delivered. Mr. H. C. Boysen, now supervisor of the Central Section, Mr. A. Rist, Sales Manager, Germany.

"France—In 1885, Mr. A. S. Lovendall was appointed sales agent, no sales being made. From 1886 to Decem-



THE PRINTING ROOM OF THE N. C. R. CO.

John H. Patterson early began to do his own printing. The N. C. R. plant, even many years ago, was in advance of the plants of most publishers, especially in colour printing and in speed of execution

MR. PATTERSON'S HOME AT FAR HILLS

ber 22, 1891, France was added to the British agency, then in charge of J. W. Allinson. From 1891 to 1896, the French agency was in charge of Mr. Girchmane, practically no business being done. In 1896, a subsidiary company of the home company was organized in Paris, the registration of which was completed in the course of the same year, under the name of 'La Nationale Caisse Enregistreuse, S. A.' The first manager was A. O. Zwick. In the beginning, it operated directly with Dayton, its territory comprising the following countries: France, Portugal, Tunis, Algiers, and Egypt.

"From 1903 to 1906, the French organization was placed under the supervision of Mr. G. H. Wark, manager for Continental Europe. From 1906 to 1907 it was under the supervision of Mr. E. C. Morse, then supervisor of the so-called Latin Section of Europe, whence it was again placed under the supervision of the Berlin company until the war was declared, when France was placed under the supervision of Mr. H. C. Banwell. At present it belongs to the Western Section which is supervised by Mr. Banwell. The following were managers of the Paris company:

"A. O. Zwick—Three months, 1896;

"Louis Faguer, from 1896 to 1901;

"G. Peratoner, from 1901 to end of 1905;

"A. Avery, from 1905 to 1906;

"E. F. Ducharme, from 1906 to 1907;

"E. C. Morse, supervisor of the so-called Latin Section;

"J. Vuillaume from 1907. (Still holding his position.)

"ITALY—The National Cash Register business in Italy began on January 7, 1886, when A. Brazanti & Bros. of Naples were appointed sales agents for all of Italy. No business was done. December 24, 1890, Enrico de Giovanni, of Genoa, succeeded the above firm as sales agent.

May 22, 1905, the 'Società Anonima Registratori di Cassa "National",' Milan, Italy, was incorporated, with Mr. de Giovanni as its first manager. With the exception of one year, i.e., 1906–07, when Italy was under the supervision of Mr. E. C. Morse, supervisor of the so-called Latin Section in Europe, the Italian business was under the supervision of Mr. G. H. Wark, manager for Continental Europe. During the war, however, it came for a time directly under the supervision of the Dayton company; later it was transferred to the supervision of Mr. H. C. Banwell, manager of the London company, and now belongs to the Western Section of Europe.

"Mr. de Giovanni was cancelled in 1909. He was succeeded by Mr. Parodi as acting manager, who in turn was cancelled in 1910 and succeeded by Mr. C. F. Kremer, former sales agent in Hungary, who was appointed manager of the Italian company. In May, 1915, when Italy declared war on the Central Empires, Mr. Kremer resigned and Mr. Stefano Moro, then office manager, was made acting manager of the company. Later on he was appointed to the position of manager.

"Belgium—G. Bondroit was appointed sales agent for Belgium in July, 1885, no business being done. December 8, 1886, Belgium was added to the agency of Great Britain, then in charge of Mr. J. W. Allinson, where it remained until December 22, 1891. It was then added to Mr. Cord H. van Erk's territory, Holland. In 1893, Mr. Arthur Stuyck was appointed sales agent for Belgium. From 1906 to 1907, Belgium was under the supervision of Mr. G. H. Wark, manager for Continental Europe. In 1905, Mr. Arthur Stuyck was cancelled and a separate branch of the French company was opened with Mr. J. Vuillaume as manager. When Mr. Vuillaume in 1907

was transferred to the position of manager for France, Mr. Louis Faguer was made manager for Belgium. In 1911, Mr. Louis Faguer was cancelled and Mr. A. F. Buss, then sales agent in Switzerland, was appointed manager of the Belgian company. Also during the war, as long as the German troops occupied Belgium, this organization remained under the supervision of Mr. G. H. Wark. When the war closed, Mr. A. F. Buss resigned, and Mr. J. Vuillaume, then manager for France, was given charge of the Belgian branch with Mr. L. Hermans as assistant manager. At that time the Belgian business was placed under the supervision of Mr. Banwell, and now belongs to the Western Section of Europe.

"AUSTRIA—In 1895 the Austrian agency was given to Glogowsky & Son, general agents for the Remington Typewriter Company. In May, 1891, the Austrian agency was added to Mr. F. A. Müller's territory, who was the sales agent for Germany; Mr. A. Sachs was appointed subagent for Mr. Müller in Austria-Hungary, which he operated from 1896 to 1898, headquarters in Vienna. In 1898, Mr. Sachs was cancelled and the business in Austria-Hungary was conducted as a company organization with headquarters in Budapest, the final incorporation of which took place in August, 1899, with Mr. G. Peratoner as manager. The business in Austria at this time was operated as a branch of the Hungarian company. In January, 1900, the main office was moved to Vienna, Tuchlauben 12, and in January, 1905, a new company was formed for the Austria-Hungarian Empire in Vienna under the name of 'National Registrier Kassen Ges. m. b. H.,' and the Hungarian company was liquidated. In 1901, Mr. Peratoner was transferred to the position as manager for France, and was succeeded by Mr. W. Martin.

Mr. Martin was cancelled in November, 1902, and Mr. H. C. Boysen, then sales agent in Germany, was appointed manager for Austria-Hungary. In June, 1903, Mr. Boysen was transferred to Berlin to the position of assistant manager for Continental Europe and Mr. Otto Rosin, then sales agent in Germany, was made manager for Austria-Hungary.

"In January, 1905, Mr. Rosin was transferred to the position of sales manager for Germany, and Mr. A. Rist, then district manager in Germany, was appointed manager for Austria-Hungary. In June, 1907, Mr. Adolf Rist was transferred to the position of sales manager for all Germany, and Mr. Otto Rosin was appointed manager for Austria-Hungary, at the same time having charge of the business in Roumania, Serbia, Greece, Bulgaria, and Turkey, with the following persons appointed general agents:

"Nikos S. Shodras, for Greece, with headquarters in Athens;

"Philipp Lustgarten, for Roumania, with headquarters in Bucharest;

"Schischkow & Co., for Bulgaria, with headquarters in Sofia;

"Otto Scheffels, for Turkey, with headquarters in Constantinople;

"I. Isailovits, for Serbia, with headquarters in Belgrade.

"In 1914 the Austria-Hungarian company had 78 sales agents, 75 employees, and 26 travelling mechanics. Total, 179. At present the territory of the Austrian company includes Austria and Hungary, which latter country is operated by a general agent, Mr. E. Purt, with headquarters in Budapest. Vienna is headquarters of Eastern Section.

I—AT THE TIME OF THE "GREAT RAIN"

That started on Saturday, March 22, 1913, in the Miami Valley. "In a moment the N. C. R. was a vast relief organization with Mr. Patterson at its head. . . . He took charge of Dayton and its sick and its homeless and its hungry as easily as though he were holding a convention and with as complete surety."

II—AT THE TIME OF THE "GREAT RAIN"

"The emergency was too big for the City of Dayton; it was too big for the State of Ohio. It was not too big for John H. Patterson. When the officers of the Federal Government reached Dayton they could only say to him: 'We can do nothing more than you have already done'."

"Czecho-Slovakia—This has been made a separate organization and a new subsidiary company has been formed with Mr. A. Puder as manager with headquarters in Prague. It belongs to the Eastern Section.

"Russia—In 1896 Mr. Tulschinsky was appointed sales agent for southern Russia, headquarters Odessa. In 1900, the business in northern Russia was attended to by the Berlin National Cash Register Company through one of its sales agents, Mr. W. Martin, with headquarters in St. Petersburg. In 1900, both agents were cancelled and the firm T. I. Hagen Company was appointed general agent for all of Russia. In 1914, the Russian organization comprised about 40 sales agents, 25 employees, and 25 mechanics. Russia belongs to the Central Section.

"Holland—The National Cash Register business in Holland began on July 2, 1885, when J. Van Nelle was appointed agent. On December 8, 1886, J. W. Allinson was given charge of the Dutch business. On September 29, 1893, Cord H. van Erk was appointed agent for Holland. On May 8, 1922, this contract was cancelled and a new one made in the name of the firm Cord H. van Erk. Holland belongs to the Central Section.

"Sweden and Finland—Graham Bros., Stockholm, Sweden, were appointed agents for Norway and Sweden, August 13, 1886. Sverdrup Engelschion was appointed agent for Norway, Sweden, and Denmark, January 4, 1892. N. E. Frykholm became agent for Sweden, Norway, and Finland in 1896. Johan Sande was appointed agent for the sale of our product in Sweden and Finland, August 10, 1917. In 1921 a company was formed by Mr. Johan Sande under the name of National Kassa Register. Sweden belongs to the Central Section.

"DENMARK—The National Cash Register business in Denmark extends over a period of about thirty-three years. Sverdrup Engelschion, the first agent for our product, was appointed January 4, 1892. No registers were sold, however, until 1895. In February, 1896, Emilius Moller was appointed agent in Denmark, and has remained as such since that time.

"ICELAND—In 1915, Messrs. Johnson and Kaaber were appointed general agents for Iceland; however, practically no business being done, they were cancelled in 1922. From this time on, Iceland was added to Mr. Moller's territory, to which it had already belonged prior to 1915.

"NORWAY—The first agents for the sale of National Cash Registers in Norway were Graham Bros., of Stockholm, Sweden, appointed August 13, 1886. Since then the following have been agents:

"Sverdrup Engelschion, appointed January 4, 1892. N. E. Frykholm, appointed in 1896.

"Jens Aspaas, appointed August 10, 1917. Norway belongs to the Central Section.

"RUSSIA, the Scandinavian countries, and Holland have been under the supervision of Mr. G. H. Wark, manager for Continental Europe, from 1898 to 1914. During the war they operated direct with Dayton, and at present they are under the supervision of Mr. H. C. Boysen, supervisor of the Central Section of Europe."

CHAPTER XVII

PATTERSON THE ADVERTISER

THE N. C. R. has had more advertising managers than any company of its size on earth—more men, that is, who held the title. But actually, Mr. Patterson himself was always the advertising director. He took advertising as his own special job because he considered that the whole business rested on advertising of the right kind. Of course he never found it. He never found anything that exactly suited him—he was always searching. But in his search he made many discoveries—characteristic ones. The best of them were translated into words and they are on charts hanging in the advertising offices at Dayton. They represent his principles—his starting points. They are:

"It isn't quantity—it's quality.

"Never depend upon the editor, copy reader, or proof reader to catch a mistake in your copy. The best and only way to get around this is 'Don't Make Mistakes.'

"Don't be a copy-cat. Be original. Use your imagination. Be sure of your facts. Be accurate.

"Write so all can understand.

"Use small words and short sentences.

"Don't be stingy in the use of pictures; 87% of all we know is learned through the eye.

"Be careful in the use of adjectives. Just because it sounds better don't say 'the bride was beautiful in a

gorgeous creation of organdie'—if she was not, and everybody knew she was not.

"If you are not sure of your facts the libel courts will find you out."

And again:

"1. Few words—short sentences—big ideas—small words.

"2. No 'ad' is large enough for two ideas.

"3. Illustrations. (Pictures are more convincing than descriptive matter.)

"4. Tell WHY as well as HOW to do it.

"5. Strong headings—avoid precedent—avoid repetition—tell the truth."

An absolute simplicity of language and directing the appeal through the eye to the thing advertised were his two cardinal points. He did not want fancy advertisements. He tore up many a beautiful layout just because the picture seemed to take away from the cash register. His favourite way of bringing this out was to gaze intently at the layout and then remark, without a trace of sarcasm in his voice:

"Ah, what a beautiful dress you have drawn there. What kind is it? Where do you buy them?"

Or:

"Well, well, I see Mr. Patterson is selling men's furnishings and clothing now. Wonderful!"

He searched the world for advertising material. If he were in a foreign city for a few days, he would be sure to seek the best book store. Then he would buy all the handsomest illustrated books. Later, when he returned to Dayton, he would take the best of these into advertising meetings and ask the managers why they could not do as well. He early began to do his own printing—because

he could not have it done as he liked elsewhere. The N. C. R. plant even many years ago was far in advance of the plants of most publishers, especially in the matter of colour printing and in speed of execution—*N. C. R.'s* have been rushed out as quickly as the special editions of newspapers. One of the requisites of an advertising manager was that he should show speed. Ten days before a Hundred Point Club convention some years ago Mr. Patterson remarked:

"We have no catalogue to give to these men. That will never do. We must have a catalogue. Have one prepared."

This was an order to get up a three-hundred-page catalogue with new illustrations and text in ten days—no makeshift production would do. It had to be as good a book as though six months had been allotted for its preparation. The advertising department worked day and night; they had five artists going in Dayton; seven engraving houses worked on the plates; and the actual printing was divided among nine establishments. During the ten days four men were constantly travelling—the post and the express were too slow. The catalogue was finished on time, and to the satisfaction of Mr. Patterson. It cost twenty-seven dollars a copy—and Mr. Patterson raised the salary of the advertising manager fifteen hundred dollars a year!

The advertising took various forms. In the beginning it was all direct advertising—some of which has been described in a previous chapter. At first the sheets were known as *The Blackboard,* then as *The Hustler,* and finally all the publications were merged in *The N. C. R.* Mr. E. D. Gibbs tells interestedly of the evolution:

"I have before me a copy of one of the first *Hustlers* issued by the company, also a copy of one of the latest journals. The first bears date of June, 1891; the latter is dated September 2, 1911. Just twenty years' difference. Yet in one part of this latest issue appears a department that was a part of the first issue and which has been featured by the N. C. R. Company from the very first—a Clerks' Corner. This Clerks' Corner is one of the things that gave the original *Hustler* such great pulling power. In 1890 there was not much attention paid to educating clerks in how to wait on customers. But the N. C. R. made education its business. They have kept it up ever since.

"In later years the name of this circular, or paper as we were proud to call it, was changed to *The N. C. R.* But the plan always has remained the same—a paper sent direct to prospects, with a return card enclosed.

"It has been sent out under various names and in various forms. It has attained the dignity of a popular magazine in colour. It has reached an edition of 1,500,000 copies in a single month. It has gone to storekeepers in a hundred or more different lines of business. It has been divided, at times, into separate editions for groceries, meat markets, drug stores, and other lines of retail trade, but always back of every issue, no matter what its form or physical make-up, was the old idea of *The Hustlers* and the return card. And no matter in what form this journal has been issued, always have those cards borne out their name of return cards, for hundreds of thousands of them have found their way back to the factory signed with the names of prospects who, by the skilful manipulation of trained salesmen, were later on turned into users. And to-day, at the big factory of the N. C. R., where the original *Hustler* itself is almost forgotten, the mailing

list is called *The Hustler* list, a name that must sound strange to the new men entering the selling field but which to the older employees, like myself, means a great deal.

"Nearly every piece of printed matter that the National Cash Register Company issued contains a return card. This applies to booklets as well as circulars and journals. The booklets have return cards pasted or stitched in them so that they will not fall out. These return cards usually say: 'I am interested in learning more about a cash register suitable for this business. Please send further particulars. It is understood that I am under no obligation to purchase.'

"Now, what a company wants and always has wanted is to get a man to write back. That's what we all expect when we inclose return cards. To make it easy for a man to do this they have tried many plans.

"Then they had a 'Hints to Storekeepers' Column,' giving practical ideas on how to operate a store. Another feature was the 'Window Display Department,' also very valuable and greatly appreciated. Why, we used to get about as many letters thanking us for the useful hints in those departments as we did about cash registers. The president's idea of the Clerks' Corner was to train the clerks in methods of order, to show them how to advance, to teach them business system, then you see when the clerks went into business for themselves they saw the necessity for using cash registers, because by that time they had acquired systematic ideas of operating a store, and this information came from the departments in *The Hustler*. It seemed like a little thing to do, but the publication of those articles, month after month, year after year, did as much to help the N. C. R. business as the best and strongest advertisements they ever published."

That which Mr. Patterson considered the best advertisement ever turned out by the company was entitled: "Business Is Booming," and was published in 1915. Why he considered it the best can best be learned from a talk that he once gave on his principles of advertising:

"The trouble with most advertising is that it isn't direct enough. It is a curious thing that many of us, when we write, become unnatural in our method and our expressions. We would not talk to a man that way if we had him seated in front of us. Then we would act naturally and tell him our story in a plain, simple, direct way, but the moment we try to put these same thoughts on paper, our expression becomes stilted. We are unnatural. We get away from the simple, direct style. This makes our advertising that much less effective. Some writers seem to think it necessary to have a preamble or an introduction to the main facts about their goods, instead of plunging right in and telling the things that they should tell about them. They confuse the reader, throw him off the track, and he loses interest before he gets one quarter through the advertisement.

"Another great mistake is in saying too much. Everybody does not care for a course dinner.

"An advertisement put in a newspaper or magazine goes before hundreds of thousands of prospective purchasers. Every word, therefore, should be carefully studied, the type display simple and easy to read, the sentences short, the words short and such that any one can understand them. When you talk to a hundred thousand or more people through the use of printed matter, you should make your advertisement just as effective as you would your talk if you were to address these same people in a large hall.

JOHN H. PATTERSON AND HIS FAMILY AT FAR HILLS IN 1920

On the left are Colonel and Mrs. Noble B. Judah (formerly Dorothy Forster Patterson); Mr. Patterson is the central figure; and on the right, Mr. and Mrs. Frederick B. Patterson

THE WOMEN'S CENTURY CLUB IN SESSION AT THE SCHOOLHOUSE

"Use plenty of pictures. If you can put a thought into picture form instead of type, do so. If it is a good, simple picture with the idea clearly brought out, all of your readers, no matter what their age or nationality, will grasp it.

"It is difficult to give any set rules about the use of illustrations. Simplicity is important the same as it is in type matter. Useless curves or ornaments or anything of that nature minimize the effect of the illustration.

"Try to get illustrations that are unusual. People like the unusual. They are attracted by something different, something out of the ordinary."

Exactly the same careful application of principles went into window displays:

"We determined that in order to get attention you must first excite interest. So we designed a series of motion displays. These brought the people up to the window. The next process was to sustain this interest and advertise the company's product. No use bringing a man up to the window to have him interested solely in a movable clown. He must be made to associate the display with the goods on sale. So the company saw to it that the stage setting was an attractive one and the goods properly advertised.

"All fancy backgrounds of figured material, ornamented work, decorative mirrors, etc., were discarded in favour of a plain material preferably of a dark tone. We got that idea from Tiffany—from the way they displayed unset diamonds. You know how jewellers show these beauties. They get you in a room covered with dark cloth and spill out the stones on a table with a black-cloth top. When the strong flood of daylight streams in, those diamonds become veritable balls of fire. You never catch a jeweller

who knows his business showing unset diamonds on a fancy-covered table or in a room covered with multi-coloured wallpaper.

"Plain goods, then, were the rule in all window displays made. And whatever colour was used as a background was continued around the sides and over the floor of the window.

"The goods displayed were always limited to two or three machines—never more than that. These, with one or two plainly printed cards, completed the exhibit. The chief criticism that we used to make against window displays in other lines of business was the faulty system of lighting. It was formerly the rule—and most unfortunately is to-day in many places—to stick a lot of electric lights around a window so that the incandescent bulbs were exposed. This made a blinding glare of light, focussing attention on the lamps instead of on the goods.

"We arranged them so that the display was flooded with a brilliant illumination—the source of which was hidden from the eye. To show you the trouble we went to to get this right, note that the president, general manager, sales manager, district manager, and local manager stood outside of the New York office one evening studying various effects of decoration and lighting, and that when we finally quit it was 12:30. But we surely did do great work that night because we found out how to make a show window pay.

"Hide the light and show the goods. Get something moving to attract attention. Have everything very plain and simple. Have plenty of open spaces. Mass your display as flowers or shrubbery must be massed in landscape gardens. Put a few neat, simple show cards on the floor of the show window. Get the name of your company below

the level of the eyes of the passers-by. This last was a big point we found out that night. We put the sign in one place and the officers would walk by and observe the effect; then they changed it around and they walked by again. Then we found the right location for the sign and that was adopted for all offices.

"The device which pulled best was a life-sized figure of a clown. He was shown seated on a chair, face to the audience. In one hand he held a wand and directly above this wand and two feet from it, entirely unsupported by wires or anything of the kind, floated a celluloid ball. It kept one position but constantly revolved, spinning around as rapidly as a top, yet never dropping down nor raising itself higher. The mechanism of the clown was such that he nodded his head and shrugged his shoulders. These actions, together with the quizzical grin on his painted face, gave him an extremely comical appearance. To add to the mystery of the action of the celluloid ball, the clown was made to move his extended arm slowly from side to side and, strange to say, the celluloid ball, still dizzily whirling, moved with the wand, still keeping the same distance above it.

"Crowds gathered around the window at all hours of the day and evening. The people never seemed to grow tired of the display. It fascinated them by its oddity and kept their attention because it kept them guessing. And soon it became noised about that the N. C. R. had a mysterious and unsolvable puzzle of a window display. As a consequence the interest never lagged.

"The week following another and equally puzzling display was put on view. A board covered with green billiard cloth was arranged on a sharp incline and six celluloid balls made desperate efforts to roll up the board.

Five of them never succeeded in reaching the top, but the sixth, with the name National Cash Register painted on it, rolled easily and silently clear to the top, then back it came down a trough to its position at the foot of the board and up again it climbed.

"'What made those balls roll up hill?' 'How could a celluloid ball roll up a piece of cloth at a very sharp angle?' 'What did it?' 'Where was the machinery? and if the machinery was there how did it do the trick?' These and other questions were asked by the greatly puzzled audiences.

"The third week the window shades came up and a circular platform covered with green cloth came into view. On it was a miniature racetrack. Again the celluloid balls, but instead of climbing up a hill, this time they rolled around the racetrack. But strange things happened to them. Sometimes a ball would roll around the entire track only to come to a sudden stop. Another ball would catch up to it and then the two would join arms, as it were, and go waltzing around the track like the merriest dancers on a ballroom floor.

"'How do they do it? Where is the force that controls them?' Again came the suggestion of electricity or magnetism, but it was manifestly impossible for those forces to control the balls, as they were not dragged around, but they rolled around as a hoop would roll along the street.

"Following this came another display and still another. Mystery grew on mystery. Each display seemed to be more puzzling than the previous one. In one the problem of endless motion seemed to be solved. In others magicians—waxwork, of course—did strange tricks. A mouse ran up a post, climbed into a money drawer, grabbed a

dollar bill, and ran down a hole with it. And so it went on—always something in motion to attract your attention and make you puzzle your brains.

"That's the way the N. C. R. made you notice their salesrooms. Like everything else that seems very mysterious and impossible of solution, these puzzling displays were not at all puzzling when the method of operating them was disclosed. Not that they ever were explained to any one, for the employees were told to say, 'Really, I don't know how they do operate' to any inquisitive callers. This statement was not an untruth, for most of the displays were about as puzzling to the men on the inside as they were to the crowds on the outside.

"One display—the remarkable clown—will have the secret laid bare for the first time. The celluloid ball was held in the air by a thin but very powerful stream of compressed air which came out of a pinhole in the clown's wand. A metal tube ran from the wand down the clown's body and through the floor to an air pump in the basement of the store. This jet of air acted on the same principle as a stream of water which, as 'most everybody knows, will suspend a ball high in the air and cause it to revolve. Why a jet of water or air causes a ball to revolve scientists do not seem to know, but it does do so, and so there you have the secret of the N. C. R. clown display."

Walking down Broadway one night, Mr. Patterson passed a shoe-store window framed in hundreds of electric-light bulbs. Mr. Patterson entered:

"I'd like to have ten thousand globes," he remarked.

"Ten thousand globes?" gasped the astonished clerk. "Why, this is a shoe store."

"Well, well, so it is," answered Mr. Patterson. "I

thought you were selling electric lights and I just needed some."

Letter writing came in its turn, and here again the best account of what happened is given by Mr. Gibbs:

"Someone, somewhere in this country, once received a reply to a letter he had sent to the National Cash Register Company, at Dayton, and not liking the tone in which it was written, forwarded it to the president of the company together with a curt note of his own. The president read the letter, wrote the man another kind of missive which squared things with him, then sent for all the factory letter books in which letters were copied, and read over many hundreds of the communications signed by the heads of departments.

"The longer he read, the more interested he became. Then he called a meeting of the heads of all departments of the recording forces and addressed them:

"'What we need at the present moment is a school of instruction in letter-writing, following along the lines of the school of instruction in selling. Many of the letters that you men compose and send out would be a disgrace to a child in grammar school. What most of you need is a training in business correspondence. You need to be taught how to say a thing briefly, politely, and understandingly. Your sentences are too long. Your expressions are ambiguous. Your words have too many syllables. You are not simple or direct enough in your statements. Our company is judged by these letters of yours which you send to prospective purchasers or our users. Very few men or women know how to write a good letter. They do not write as they would talk, but use stiff, unnatural phrases, long words, and involved sentences. What we need is a school in which some compe-

tent instructor can teach us how to say what we ought to say in a way that will satisfy the recipient of the letter and make him a friend of the company.'

"Mr. Patterson then read many of the letters to show the men that his criticisms were just and reasonable, and at the close of the meeting the general manager received instructions to engage the services of a good school teacher. A young man who had taught school in Massachusetts was selected to do this work. His name was W. C. Holman, who in later years made a name for himself as a writer on various topics connected with advertising and salesmanship. If there was any one thing that Holman could do and do well, that was to write. He had great ability in that direction, and, best of all, was able to teach others how to acquire the knack of writing business English. He had an attractive personality which enabled him to win the sympathy of his audience and was possessed of a good clear voice.

"The first thing that was done with Mr. Holman was to turn him loose in the filing department, where copies of letters were kept. He was provided with a stenographer, and they made copious extracts from the letter books. In the review of these letters which followed, no names or initials were used, so that no one but the writer of a letter could determine who was responsible for it.

"The ordinary way of bringing a matter of this kind to the attention of a large number of persons would be for the chairman to read the letter aloud and then comment upon it. But the National Cash Register Company never did do the usual. Each letter criticised, together with a copy of the letter as it should have been written, was photographed on a lantern slide and shown on a screen. In this way all could see the letter instead of

hearing it read, and, best of all—and no pun is intended—the mistakes were magnified. The very enlargement of the letter served to emphasize the errors. Some of the mistakes made were so ludicrous that they created roars of laughter. I made a copy of one letter that made a pronounced hit:

> "'DEAR SIR—
>
> 'The head of this department is away on his vacation so your letter cannot be answered but I will reply about your register. If it does not work by pressing the key down it may be stuck so please push hard with all your might and if it is stuck it will be all right sometimes they get sticky so if you put on some oil your key will push down.'

"That particular letter was sent to a man who had complained that he could not operate his cash register after it had fallen from a counter in a grocery store, landing near a barrel of molasses!

"The sessions of this school of letter writing were held in a small building near the factory and were attended by about one hundred men and women. The instructor told them that there were three things that a man must know in order to send out a good business letter.

"First, what to say. He must have good thoughts.

"Second, how to say it. He must know the forms of good expression.

"Third, how to put it on paper. He must know the forms of good mechanical execution.

"They were taught that a man cannot write clearly what he has not thought out clearly, that he cannot make luminous to other minds what is dark in his own mind.

Before a man begins to write it is not necessary that he should know the succession of words he is to choose, but it is necessary that he should know the succession of thoughts that he is to express. The instruction on letter writing was not confined to those who dictated the letters; it included all men and women stenographers of the factory Particular stress was laid upon the appearance of a letter. It was shown by photographic examples that this had much to do with its effectiveness. Much attention was paid to the matter of neatness.

"One important thing that was impressed upon them was that a man should never write a letter or answer a letter when labouring under excitement.

"Then came instruction on addressing envelopes, sealing envelopes, and affixing the stamps. The boys in the mailing department were shown by lantern slides how slovenly an envelope looked with the stamp in the wrong place, or twisted, or upside down. Mr. Holman showed hundreds of examples of grammatical errors made in letters and gave the men and women some simple rules to observe. These were printed in pamphlet form and a copy given to every employee in the factory and company offices. Like the other unusual things done by the company, this school of training on business correspondence did not meet with a hearty reception when it first started. But just as soon as the employees saw the object of this school and what it meant to them in their departments, they entered into the work with a vim, and were quick to learn and profit by what was told them."

Mr. Patterson on Advertising would not be complete without reprinting his two favourite "pyramids" on advertising, the first entitled "Advertising Is Teaching" and the second "Advertising Helps Everybody."

Advertising Is Teaching

People to whom it goes:
- People who are intelligent.
- People who are ignorant.
- People who have little time to read.
- People who work hard and are too tired to read.
- People who have time to read.

Write so all can understand.
- The poor man's vote counts as much as the rich man's.
- The poor man's dollar is worth as much.
- Write in the vernacular of the people you want to interest.
- Write so the ignorant can understand.
- This makes it easy for the intelligent.

How to do this:
- Use small words, big ideas, and short sentences.
- Make every sentence convey but one idea.
- Use big type and many pictures.
- Abbreviate as much as possible.
- Never mention a competitor's name.

The value of pictures:
- A picture has no nationality.
- It speaks to each in his own tongue, no matter what his language may be.
- It talks in a way that either child or adult can understand.
- It speaks all languages and talks to all ages.
- Nature alone carries so universal a message.

Five ways of advertising:
- By showing the thing itself.
- By moving pictures of the thing in operation.
- By still pictures of the thing.
- By printed words of description.
- By spoken words of description.

Advertising Helps Everybody

The consumer:
- Advertising tells the truth about merchandise important to health, comfort, and economic living.
- It gives an opportunity to compare prices.
- It increases sales.

This means greater production and lower prices.

Advertised goods are guaranteed by manufacturer, magazine, and merchant.

The consumer is protected against misrepresentation and substitution.

The factory employee:

Advertising enlarges the market and builds a permanent demand.

This means steady work. There are no slack seasons. Production is evenly distributed.

As the factory grows, opportunities for workers are greater.

The greater the factory, the better the working conditions.

Profits and wages increase as production increases.

The store clerk:

Advertising teaches the clerk all about the merchandise he sells.

Sales are easier when both customer and salesman know the merchandise.

Sales records are increased because of increased demand.

Advertised goods are half sold before they are shown.

There are fewer complaints. Advertised goods are as represented.

The merchant:

Advertising divides the selling cost between merchant and manufacturer.

Goods move faster.

The turnover is multiplied. Stock is kept new and profits increase.

Stock is put on a standardized, evenly moving basis.

Reliable goods give the house a reputation worth money.

There is no need to stock unknown and speculative goods.

The manufacturer:

Advertising stabilizes production and makes big industries possible.

It guarantees the growth of any business.

Advertising gives the manufacturer the security of owning his market.

It increases sales and increases profits.

It is the driving power behind the sales organization.

It creates the demand.

CHAPTER XVIII

THE MAN AS A CITIZEN

ON SUNDAY, March 25, 1913, the "Great Rain" started in the Miami Valley. And then John H. Patterson rose to the greatest moment of his life. Everything that he had or knew went into those flood days —all his organizing genius, all his resource, all his foresight, all his grasp of detail, and all his money rose to instant summons. In a moment the N. C. R. was a vast relief organization with Mr. Patterson at its head. The heights the man could rise to appeared. He took charge of Dayton and its sick and its homeless and its hungry as easily as though he were holding a convention and with as complete a surety. The emergency was too big for the city of Dayton; it was too big for the state of Ohio. It was not too big for John H. Patterson. When the officers of the Federal Government reached Dayton, they could only say to him:

"We can do nothing more than you have already done."

The city of Dayton is built on low ground between two lines of hills. The Miami River, ordinarily a quiet sort of stream, is joined near the city by the Stillwater and the Mad rivers; then the Miami takes a loop through the town. In times past, when the water grew high, it usually abandoned the loop and took a direct course through what is now the centre of the city. To stop these incursions, dikes were built—dikes that were supposed to stand any possible rising of the waters. Mr. Patterson never had

any faith in the dikes—that is one of the reasons why the N. C. R. factories were built on the hill far above the highest flood point.

All day Monday it rained. All Monday night it rained. On Tuesday morning, when Mr. Patterson reached the factory at half-past six, he was worried. He went to the roof of the office building and looked over the country. Then he called for his motor car and with Mr. Barringer—the present general manager and vice-president, who was then his secretary—he rode about Dayton and up and down the river banks. When he returned to his office he called all the executives into a meeting.

"Dayton will have an awful flood to-day," he announced. "We must prepare to house and feed the people who will be driven from their homes."

Mr. Patterson, crayon in hand, turned to the big pedestal pad which is in every office and meeting room of the N. C. R. and quickly sketched a pyramid organization of the executives to take care of Dayton when the flood came. Then he said:

"Gentlemen, here is a sketch representing the organization known as the N. C. R. I now declare the N. C. R. out of commission and I proclaim the Citizens' Relief Association. Here is its organization."

The new organization was under way within five minutes—the meeting had lasted less than ten minutes. Every motor car and wagon for miles around was rushing food, bedding, and hospital supplies to the factory. The N. C. R. was mobilizing against disaster. I once asked Mr. Patterson how it came about that he was so sure of himself—how it was that he was willing to throw the whole force of the company into preparing against an

event which had not yet happened. He said, very simply, something like this:

"I had studied the lay of the land for years and I did not see how the city could escape being some day caught in a big overflow of the Miami River. The river's banks were low; drainage of land above the city was poor; the easiest way for an extra amount of water to escape was through the town; and the country that the stream tapped was such that it would some day inevitably provide more water than the river could hold. That is why I built our plant on high ground. There was nothing lucky or accidental about that—nothing to marvel about, though people did marvel at our forethought.

"When the big flood came we did not rise to an emergency, because there was nothing unexpected so far as I was concerned. I had always looked for just what then happened. During the heavy rains that preceded the overflow I had been watching the river carefully. At six o'clock in the morning of the day of the flood I felt that the river must have about all that it could hold. I made a little tour of inspection in a motor car, and although no water had as yet come over the banks I ordered all the extra bread that our baker could produce, sent dozens of men out through the countryside to buy provisions, gathered cots and blankets for a hospital and refuge, started the carpenter shop at making rough large flatboats, and developed a working relief organization.

"This was all finished early in the morning. At seven o'clock the levee broke and in a few hours the city was the centre of a raging torrent. But we had 'kept ahead of the market' and were ready. Why shouldn't we have been? If a river is rapidly getting more water than it can hold isn't it bound to overflow? If the topography of the

country is such that the easiest place for an overflow is right into a town, why then should a flood be such a surprise? If you start a rock rolling down a steep hill, is it a matter of any great surprise if it reaches the bottom?"

The preparations which Mr. Patterson discussed so casually were actually on a magnificent scale. Neither he nor the N. C. R. had ever functioned so perfectly. The best and most graphic account is that written by Arthur Ruhl in the *Outlook*—who arrived on the third day:

The water stayed at its highest level for several hours, fell eleven inches by Wednesday morning, and it continued to fall about two and one half inches an hour. By Sunday morning everyone had left his house, or was able to do so by boat, and the haggard prisoners could descend into the slimy ruins of their city. . . .

As the city staggered up from the mire, helpless and for the moment almost hopeless, there was one rock to turn to, one thing which stood high and bright in its pride of strength above the general desolation. This was the plant of the National Cash Register Company on the southern edge of the town. What Dayton might have done without John H. Patterson and the highly trained and flexible organization, the keen, taut, loyal force which surrounds him, can only be a matter of speculation, inasmuch as "The Cash," as they familiarly speak of it in Dayton, was for days the stricken city's brain, nerves, almost its food and drink.

This great plant—a city in itself—covering the equivalent of eight or ten city blocks in what is practically a park, with asphalt streets, lawns, trees, and buildings fitted with every conceivable detail of the model factory, with acres of workrooms as clean and light as the reading-room of a public library—this polished organism was turned in a twinkling, without discord or hitch, into a vast, smoothly working executive headquarters, hotel, hospital, and relief station. Here army, city, and state officials, doctors, nurses, and correspondents, came. Here, all day, was a bread line two blocks long, here supplies were hurried as relief trains brought them in, from here automobiles and motor trucks, commandeered wherever they could be found, went sputtering away day and night on their errands of mercy.

The water had scarcely rolled over the city before the National Cash Register carpenters were pounding boats together. Boat-building was not their regular work, but that seemed to make no difference, and they turned out one every seven minutes until two hundred had been built, manned, and sent out to rescue people from house-tops and second-story windows. By Wednesday night a special National Cash Register relief train left New York, and two others followed on Thursday and Friday. The president of the company himself was made chairman of the Relief and Citizens' Committees and almost dictator of the town.

There appeared to be nothing to which this factory and the men connected with it could not be effectively turned at a moment's notice. There was a place for everything and a placard to tell you where it was and how to get there. Among the buildings is a huge ten-story structure used ordinarily for the executive and clerical force and the company's welfare work. This building has a large dining room and kitchen, bedrooms and bathrooms, rest-rooms, and gymnasium. Two thousand five hundred people were fed here for days exclusive of the ordinary relief work, and well fed, and served by waitresses in uniform without hurry or delay. As many slept in the building, the more fortunate as comfortably as in the best city hotel.

The sight of the place, alight and humming, with scores of automobiles rumbling and smoking about it, was, to those coming up from the dismantled city, a constant wonder. On one floor newspaper correspondents were pounding out stories to all the world; on another, in the hospital quarters, babies were being born or flood sufferers fighting pneumonia; on another, heaps of clothing sorted out and sprayed with disinfectants before distribution; away up near the roof mothers with children and toothless old women dozed in rocking-chairs, while pianos pounded out rag-time or church hymns.

Just what such an oasis means is difficult to realize unless one has had the experience of a city literally without food, water, light, or the means of getting about. At the National Cash Register plant you might have thought you were at a political convention or in some jolly exposition hall. There was food for everyone, coffee and sandwiches at every turn, distilled water in individual paper cups. Newspaper reporters, shot off by their city editors without time to get so much as a toothbrush or a collar, found themselves sleeping in brand-

new brass bedsteads, under down quilts, and rattling round in tiled bathrooms, where everything was supplied them, even—if they had time to use them—with buffers to polish their finger-nails. When their clothing gave out they were given new ones—clean linen, overalls, pajamas, anything they needed. Hard-worked clerks and attendants at once acquired all the special knowledge of valets with the gracious manners of Southern gentlemen. Men smeared with mud were asked, as they went to bed, to send their clothes to be pressed, and there were large signs posted in the lower corridor stating that clothes-pressers and barbers worked all night and accepted neither pay nor tips. As I stepped into the hall late last night a young man, serving as watchman outside the door, lifted his head from his arms, murmured, "Are you restin' pretty good?" and, satisfied of this, returned to his slumber. To step from the silent, sodden city into this humming Babel, where everything seemed to be had for the asking, was like stepping from the infernal regions to one of those sanitary socialistic Utopias pictured by Mr. H. G. Wells.

Only this—and here was the piquant interest of the thing—was the very apotheosis of centralized, one-man power. The National Cash Register is, in a peculiarly complete sense, an expression of the somewhat eccentric genius of one man—an industrial captain. No novelist or playwright trying to picture the drama of modern business ever devised anything more ingeniously dramatic—this heroic use of efficiency.

The president's son, a frank, hustling, unspoiled youth, worked day and night, first with the rescue boats, later with motor cars, and even in the morgue. His daughter, a bright-eyed girl of twenty-one perhaps, was at work with the other waitresses in the dining room. The town's feeling toward the moving spirit of this concentrated efficiency was almost religious enthusiasm. "Do you think," one man asked me—he was a worker away over in the Riverdale section, and nothing had been said of Patterson—"if God Almighty wasn't with him, that he wouldn't have a wet place out there!"—as if destiny itself had fixed the Cash Register buildings on high ground.

For a week Patterson's was the biggest figure in the nation. Then he went on about his affairs.

Among the first of those affairs was to raise a fund of two

million dollars to provide against the possibility of future floods. Out of this came the great engineering work of the Miami Conservancy District, which is in many respects second only to the Panama Canal in engineering importance and which has precluded the possibility of further floods in Dayton.

Mr. Patterson was appointed chairman of a Citizens' Relief Committee consisting of five men: Colonel John H. Patterson, Colonel Frank T. Huffman, Mayor Edward G. Phillips, Adam Schantz, and John R. Flotron. As chairman he was given "full authority to act for and in behalf of the Citizens' Relief Committee to take entire charge of the relief work for the present and future upbuilding of the city."

This committee at once set to work to clean up Dayton —it was deep in slime. To quote Mr. Patterson:

"After the Dayton flood, when the people wanted to abandon the town to its ruins, we staged a meeting. We had a great red heart on the platform with contrasts of what Dayton had been, what it was then, and what it might be.

"We showed stereopticon views of the pioneers who had made Dayton and of the big, individual things that those stalwart men had done. We did that because in the audience were many descendants of those very men, and if the descendants were won over, there would be enough leaven through the whole audience to raise it.

"And we did raise that audience! At the beginning of the meeting not one tenth of the people wanted to bother further with Dayton. Then they began to be interested —they warmed up, bit by bit, until finally you could not have kept their money in their pockets. When the meeting closed, we had two million dollars subscribed. The

last dollars were rung up on an enormous cash register standing on the steps of the court house amid the wildest enthusiasm I have ever known."

Of this two million dollars Mr. Patterson and the N. C. R. gave about one third. And the whole expense of the relief work of the company, amounting to more than a million dollars, he calmly charged as an operating expense of the company!

* * * * * * *

Dayton was to Mr. Patterson not merely the place where he had a factory; he could not conceive of a factory in such fashion; he could not conceive of a city in such fashion. For a factory was to him not an assorted lot of bricks and mortar surrounding an assorted lot of iron and steel contrivances. A factory to him was a collection of human beings.

He had brought certain people together to work in the factory he owned and he assumed the responsibility of doing all in his power to make their lives more useful than if he had not brought them together. It was a responsibility which had no limit. He did not say that he assumed any responsibility. He put it in another way. He said that people—always people—could not work at their best unless their health was of the best. And, further, they could not make the most of their health unless their education was of the best. He translated all of this into the single mercantile phrase—"It Pays."

He made his own factory a good place in which to work; he went as far as he could toward seeing that the factory supplied the sanitary and medical facilities that the home might lack—for, in the beginning, it was beyond him to go into the homes. But, as time went on, he saw that the homes of the people and what they did when not at work

were even more important than the conditions under which they worked. He was not content that the work of the N. C. R. should stop at its doors. And so he went into the cleaning up of Dayton.

He had other reasons for wanting Dayton to be the best city of its size anywhere. It was his city. His ancestors had helped to build it. Whatever was his had to be of the best. Another man might have faltered before the task of remaking a whole city and moved his own residence to some spot that did not need so much improvement. Many wealthy men spend their less active days in buying mansions in those parts of the earth which seem pleasing. The average rich man collects more houses than he knows what to do with. Not so with Mr. Patterson; he did not spend a great deal of time in Dayton—he was always travelling. But Dayton was his home, and his house at Far Hills was his only house. In addition to it, he had only a camp in the Adirondacks. He had not the least interest in what is called "society" and so, buying a house in some fashionable locality, either in the United States or abroad, never occurred to him. His home was in Dayton.

And did the citizens of Dayton respect his motives and join with him to make a better Dayton? They did nothing of the kind!

During the critical years when the N. C. R. was building, a fair portion of the citizens of Dayton and all the politicians did everything in their power to block any movement which might benefit the N. C. R. Mr. Patterson was regarded as a menace. For who had ever heard of treating employees the way he treated them, or paying higher wages than it was necessary to pay? And why have so much nonsense about buildings and landscape gardening? Why not run a factory instead of a show? To the

A CHILDREN'S MEETING EVERY SATURDAY MORNING

At the N. C. R. Schoolhouse. From 3,000 to 4,000 children attend these meetings

THE BOYS' BOX FURNITURE COMPANY AT WORK

The boys spend two years under a teacher, after which they receive a diploma which admits them to a job in the factory at any time later

politicians the N. C. R. was a big, rich corporation that ought to come across in a substantial way. Mr. Patterson refused to come across; he would not pay a cent for municipal favours. And therefore the politicians took care that he suffered for his independence. For years they kept a railway siding from him, and all the company material had to be trucked across town; they were always turning up with technical violations of the law. If the N. C. R. wanted a permit which any private citizen could get as of course in ten minutes, the politicians found some way of holding up action.

In addition, the city was "wide open" in every sense; its schools were poor, and its streets were dirty. It was a one-horse town controlled by a political ring.

Conditions became so bad that along in the early nineteen hundreds Mr. Patterson let it be known that he intended to move the whole factory to some other city. He was in earnest in this. No one at first believed him. The politicians just laughed and gave him some private advice about how to use a little of the right kind of oil so that he might not have so much trouble in getting what he wanted. Mr. Patterson went right ahead with his plans to move. Delegations from many cities came to him; he had offers of free sites in half-a-dozen big cities. He did not want to move, but Dayton had become all but impossible. The business men finally awoke to the fact that Mr. Patterson was in earnest and they asked for an opportunity to hear the N. C. R.'s reasons for leaving. Mr. Patterson was not in Dayton—he stayed away through much of this period. The general manager presented the case and this is in part what he said—and it is important as showing the feeling of the period:

"We do not know whether we are going to move or not.

Nobody knows that. When we do we will be the first to tell our employees.

"People say all over town, 'You cannot move that place.' Let me tell you this: Mr. Patterson was never more serious about anything in his life than about taking this plant away from here, if he can get the right kind of financial inducement. You business men of Dayton might as well know this now. People come here and offer us this and that and we are carefully weighing both sides of the question.

"We know exactly how much it will cost to move this factory and there are several cities which have already practically agreed to assume the amount of our moving expenses in order to secure the location of a factory with a payroll of $4,000,000 a year now, and it will be $8,000,000 in five years.

"We have been forced in self-defense to hurt Dayton. Do you suppose manufacturers in Pittsburg, Buffalo, Syracuse, Rochester, Troy, and many other cities would think of moving to Dayton when the biggest plant in Dayton is trying to get out of it? This has all been brought up by Dayton itself, that is, not by all of the people of Dayton, but by the actions of the officials and apparently with the consent of the people, because very few have uttered any protest.

"Now, I will put the question plainly to you business men: Would you continue in a town that would not help you to increase and extend your business; that would call you crazy and would scoff and laugh at your methods? Would you continue in a town that not only refused a public park, but is still refusing to take action toward getting one? Would you stay in a town where the sentiment of the people was such as to keep your employees

unsettled and stirred up all the time about their positions?

"We have tried to bring skilled men here from cities in the East and some in the West. They say to us: 'What advantages are there in living in Dayton? What amusements have you there? Where could I go with my family for recreation? Have you a park? Have you a river that we can go boating on?' Now we have to answer these people truthfully and tell them we haven't these things. If we told them the truth we would say: 'We have a plot of ground that could be used for park purposes, but which is used for horses and one week out of the year is used for races and a fair. The balance of the time it lies idle. The people could use this for a park if they would arouse themselves and take action.'

"The one argument we have used, and which is an advantage to many of them, is the fact that we have good markets; that the farmers come in with their wagons, back up to the sidewalks, and that the people can buy anything fresh and cheap direct from the farmers. We have used this argument until it is threadbare, because we had to give some advantages of moving to Dayton.

"Then, after we do bring people out here, after using all kinds of arguments, they get dissatisfied and disgruntled in a short time because of the many malicious things that are said against the company. They hear downtown that their positions are in danger, that the president of the company is crazy, that the company will go bankrupt, that we are heavily mortgaged, etc., and they soon become discouraged. You may not think these things exist. We know they do. We have plenty of proof on that score.

"Now, gentlemen, what Dayton needs is to wake up

along many lines, get in line with the most progressive cities of the country, have a 'citizens' party' and elect men to office regardless of their politics, have a committee that will look after the interests of its citizens and see that injustices are not done, that will prosecute unfair officials, that will demand the resignations of incompetent officials—a committee that will be active and will work in the interests of the city. Then, instead of our plant trying to get out of the city, you would find a number of plants trying to get into the city.

"Let the business men of Dayton get together and stop abusing a man because of his progressive ideas and let this committee endeavour to have more of Dayton's business men adopt modern ideas."

From this period dates the formal recognition of Mr. Patterson as Dayton's first citizen. He began to be a prophet not without honour in his own country. The people began to realize how little of Dayton would remain if the N. C. R. were taken away and then, very gradually, to comprehend something of the worth of Mr. Patterson as a citizen. That comprehension did not reach its height until after the flood in 1913, which has been already told of, but the business men of Dayton backed up by a majority of the citizens compelled the politicians to lessen their opposition to the company and so to change conditions that the company would not move.

Mr. Patterson had long before this sketched his ideas of government. He thought that a government was merely a business institution—a great company in which the citizens were the stockholders. He had many charts drawn showing how the city of Dayton, the state of Ohio, and the United States, were really but great corporations in whose administration partisan politics should

not enter. He held that as long as politics were partisan, the offices would be used to pay political debts and therefore would go to the best wire pullers and talkers instead of to the men best qualified. He did not like the Civil Service idea because no examination could answer the two vital questions to him in the selection of an officer—"What has he done?" and "What can he do?" Often he said:

"Our present form of government cannot succeed. We must organize as a business."

He used to call the United States "the biggest business in the world."

Naturally this approach was not one to endear him to the professional politician. The first opportunity to express his views came in 1896—long before the agitation about moving the factory—when he was asked to make a speech at the banquet celebrating the Dayton Centennial. This is, in many ways, the most important address which Mr. Patterson ever delivered, for in it he sketched a whole programme for the betterment of Dayton—a programme which his hearers thought was merely fantastic. This address shows how early Mr. Patterson had formed plans for Dayton—plans far in advance of the thought of the time. The extraordinary feature is that in the years following nearly every suggestion which he made in the address has been carried out—as will be developed in the next chapter. The address was printed in the Dayton newspapers and Mr. Patterson also had it reprinted in many thousands of copies and circulated through the whole country. The entire address is too long to print in full, but the essential parts follow:

"What ought the Dayton of the future to be? Does its greatness depend upon the matter of its population? If

it does, then Peking, with all its squalor and vice, is a great city. To become really great, however, our city must accomplish the largest amount of good for the largest number of her citizens, uniting all the best things which exist in other cities into an ideal city. Does she do this now? No; and why not? Because we are not educated sufficiently to realize our most urgent needs. We have no definite municipal ideas. Before we can have a great city, we must learn what a truly great city should be. We must first educate the people. . . .

"The Dayton of the future will choose for her bulwark greater schools. The schoolhouses will be built on hygienic principles. Children will study in an atmosphere of beauty, amid good pictures and statuary. All school books will be sold at cost by an agent of the state, and will not be changed every three months. We shall commence with a large number of kindergartens, the influence of which will eradicate the bad and upbuild the good in our children.

"Evening sessions of our schools will be held for those who cannot attend during the day, and we shall found a large number of scholarships for study and travel. The news of each day will be bulletined in the schoolhouse, so that the scholars may be kept posted in current events. . . .

"Machinery has compelled large numbers of women, as well as men, who have no special training, to change their work. And to these new women is open the household. We will elevate domestic work by teaching it as a science in the schools and by influencing rich and well-to-do people to make it fashionable by teaching it to their daughters, who will lend a helping hand to the housemaid, as they do to-day in England.

"Our schools of the future will have courses in design-

ing patterns for carpets, wallpaper, and dress goods, for freehand drawing and illustrating, glass decorating, feather-, flower-, and bead-work, architectural drawing, and ornamentation of a useful and artistic nature. They will teach landscape gardening and scientific farming. There will be classes in health, ethics, and finance. The boys will be given opportunity to study salesmanship, politics, philanthropy, and the principles of statesmanship and sociology. The girls will be taught cooking, dressmaking, and food chemistry, which are now picked up at haphazard, and in many cases never learned at all.

"With manual training schools, we shall be able to create a home industry in all the toys and bric-à-brac which we now get in foreign countries, and for which millions of dollars are sent abroad annually. We shall keep this money at home by teaching our own people to make goods for which it is now sent abroad.

"In Dayton of the future the city proper will be given up to business life, while our homes will be situated in beautiful suburbs. Our greater Dayton will extend its radius for miles in every direction over its circlet of beautiful hills. Special rates of fare will be given to workingmen during certain hours of the day to encourage their residence in the suburbs. The working day will be shorter, necessitating the employment of more workmen; a more general system of education will create better workmen, so that wages will increase rather than diminish, and the living necessities of this class would now be considered luxuries. It follows that there will be a market for all products, and that the law of supply and demand will govern as it does to-day.

"Employers in the Dayton of the future will come more in personal contact with their employees, and will teach

them their methods of earning and saving money; they will become social missionaries, acting for the good of the city, and will teach their men so to live that they may get the largest amount of happiness from life.

"In the future women employees will be permitted to discontinue work one half hour earlier than the men in order that they may avoid the rush for street cars. This practice has paid our company well.

"In this new Dayton all wires and all pipes will be carried under the streets in large sewers, so that repairs to them can be made without tearing up the streets. Franchises for all private enterprises which in any way occupy the streets will be sold every twenty-five years to the highest bidder, and from this source the city will gain a large income, which can be used in making beautiful her thoroughfares.

"The new Dayton will have not only one library, but a system of libraries scattered through the different wards. One of the greatest aids to increase cultivation will be the fact that the library will seek its readers. Our children will read good literature, because it will be accessible. We shall have a free conservatory of music, a free art school and art gallery, and those who own valuable collections of paintings will get up loan exhibitions, where even the poorest may enjoy their treasures at certain times in the year. Free lecture courses will also be given.

"We shall have a competent board of health to attend to our sanitary condition. In case an epidemic should break out, whom should the poor woman who sits by the sick-bed blame? Not herself, but the city, and it will pay all loss occurring to the private individual in such cases.

"In the future our city will be better illuminated, for light will be cheaper; the excess paid by the city to secure

proper lighting will be regarded as a legitimate outlay for public protection, the same as for police. The doorways of our dark and gloomy houses will be illuminated in the evening with coloured lanterns. No smoke will defile the city, for gas will be made at the mines and electricity at far-away water-powers, and will be supplied at low prices. In those days there will be no monopoly in light and heat any more than in coal and bread. . . .

"How shall we get money to accomplish all these changes? The officials to-day control revenues which are sufficient to bring them about. Who prevents the people from controlling these revenues? The politician: the 'boss,' who never makes a speech, has no views on the public questions, and whose emotions are those of mercenary calculation only. It is the 'boss' who lines up delegates, and depends upon row after row of dutiful henchmen to vote as he directs. A poor system in the city will do more for the public good with an able and honest, self-dependent council at the head of it than the best system with a political 'boss' at the helm. An unworthy head at once devitalizes a city government. This is true, no matter what the clime, race, confusion of races, or form of government.

"Woe to the city whose officers, even though honest themselves, are the creatures of the 'boss' of its political slums. No public officer can serve two masters, and there never was, and never can be, good government through 'boss' rule. The 'boss' does not nourish resentments; he never looks to the newspapers for praise; he is heedless of their criticism. We must abolish the 'boss.' It is as much our duty to do it as it would be to drain a swamp and protect the health of our city. This is the right thing to do; it ought to be done; the people will say it shall be done.

"It is a small matter to manage a city, for we have nothing to do but to spend money; whereas, in a large business we have not only to spend money, but to spend it in such a way as to make money in return, which increases the difficulty tenfold. We expend in our business about $2,000,000 a year; the city of Dayton spends about $1,000,000. A city is a great business enterprise whose stockholders are the people.

"Here you must pardon me for illustrating from my own personal experience. We have found a monitor cash-register machine system which organizes the business of retail stores and brings order out of chaos. It does not prevent wrong-doing; it does not prevent mistakes; but it tells the proprietor after they have occurred, and he can thus guard against similar errors.

"We have applied this system to our factory and business, in which one thousand five hundred people are employed. Here two of the stockholders took the place of the monitor machine, and acted as guardians and advisers of the company. Experts have pronounced ours the best system of factory organization in the world. As a result of it the product of the company has increased in quantity and improved in quality, while the cost has been lowered. If this system has succeeded in the modern factory, why should it not succeed in the city, where the problems to be solved are not one tenth as difficult?

"This monitor should be a self-appointed body of men, who have sufficient ability and integrity to inspire the people with confidence, and might be called a monitor club. Five good active men ought to accept this trust. The majority of the committee should rule, and they should rotate the chairmanship. Each of these five members should act as chairman to a sub-committee, com-

posed of himself and four others to be appointed by him, thus making twenty-five members in all. For example, the health division might be divided into five committees —sewerage, water, bath, hospital, and house sanitation. We should thus have twenty-five committees, each composed of one man.

"Our municipal affairs would be placed upon a strict business basis and directed, not by partisans, either Republican or Democratic, but by men who are skilled in business management and social science; who would treat our people's money as a trust fund, to be expended wisely and economically, without waste, and for the benefit of all citizens. Good men would take an interest in municipal government, and we should have more statesmen and fewer politicians. . . .

"The monitor club should have no executive authority, but should simply report to the proprietors of the city (the people) all that occurred and solicit information, complaints, and suggestions from all citizens. Such a club would have called the attention of the public in advance to the South Ludlow Street sewer. They started to build a stone arch about a mile long over the open creek, which contained nothing but surface water. It was plainly so much larger than the requirement that I called the attention of the authorities to the matter, and the work was stopped, the rest of it being constructed of the proper dimensions. This arch will probably stand for one thousand years as a monument to those city officials.

"Large amounts of money should not be spent for any purpose until the amount and manner of expenditure had been previously announced through the press or in some other public manner, and those who take public contracts should not be allowed to sublet them.

"I have talked over this monitor system for cities with some of the best thinkers of New York, all of whom heartily endorse it. I believe that it will enable us, if it is adopted in Dayton, to accomplish all we so much desire in the future. By it a healthy public sentiment will be cultivated, which will hold in just execration the man who misplaces the trust of the people and causes them to lose large benefits.

"We need to aid us public-spirited papers which will 'call a spade a spade.' The New York papers spend five editorial lines in denouncing the 'boss,' on another page they illustrate a banquet given to him, and the rest of the page is taken up in describing his horses, his retinue of servants, and the trip which his family is about to take abroad. Under the monitor system such things will be held up to ridicule and contempt, and we will rather honour him who, at the risk of unpopularity, points out wrong-doing among those in power."

That speech was Mr. Patterson's challenge to the bosses. They accepted the challenge and they fought him!

CHAPTER XIX

THE DEVELOPMENT OF DAYTON

WHEN the agitation against the removal of the factory from Dayton was on, Mr. Patterson wrote a letter to the president of the Booster Club in which he referred to his address of eleven years before—showing that the plans he had formulated were ever with him. In this he said:

DEAR SIR: I see by the Dayton papers that the Booster Club proposes making some kind of a demonstration or a visitation on my return home, and I note that you are president of the club. While I wish to thank the club for its kind intentions, I must positively decline any reception, demonstration, or resolutions.

The proposed removal of our plant from Dayton is too serious a matter to treat lightly. It is a business proposition and we place Dayton in the same position that we place other cities; that is, we will be pleased to show the business people of Dayton through our plant, and let them judge of the value it is to Dayton, and after they have seen it, we will be pleased to have their proposition as to what they will do to have The N. C. R. Company's offices and factory remain in Dayton. I must say, however, that there are so many reasons why we should leave Dayton, and so many advantages in locating the plant in other places, that it will be almost impossible for Dayton to retain it.

Now there are certain things that the Dayton people can do and which they ought to do regardless of whether The N. C. R. Company remains in Dayton or not. If the business men and others in Dayton are as earnest in their protestations as they appear to be from the newspapers which have been forwarded to me, they will commence at once to improve conditions in Dayton, because works and not words will count now. The people of Dayton should do these things

in their own interest and because it is right to do them, and not solely to retain our plant. It is not necessary to wait until I get home to start to do them. . . .

Dayton should welcome all railroads at surface grades. It is ridiculous for a town of the size of Dayton to build a wall around itself, and say they cannot come into it except overhead or underground. Nothing will make Dayton grow so fast as more railroads. Transportation and publication make the world progress more than anything else, and just in proportion as a country, a state, or a city has these things, will she progress.

Dayton seems to have gone to extremes on this question of grade crossings, and nothing that the citizens can do could hurt the town as much as to have these reports scattered broadcast that not another railroad could come into Dayton at surface grade. Capital is not going to invest in railroads when such conditions exist.

The people of Dayton should use their influence to have the state stop expending hundreds of thousands of dollars repairing the canal, which can never be of any value. It should be converted into a railroad bed, the railroad paying the proper compensation to the state for the right of way. When I was in China I noticed that they were making railroads of the canal beds. When I got back to Dayton I saw that we were taking dirt out of the canal and dumping it on the railroad tracks alongside of it. Just think of the absurdity of the thing—taking mud out of a canal and dumping it on a railroad track.

We want our plant to be connected with at least two railroads, and in case we move away from Dayton, this will help your club to induce other factories to come to Dayton and occupy the buildings which we are unable to move away from Dayton. This would include our old office building and one or two others not constructed of steel.

The Booster Club should stop the extension of the city limits. Dayton has the reputation of being the worst-governed city of the state, and many of its people seem to be proud of the reputation. The government of the city and county should be taken out of politics, the citizens to vote for the best men regardless of party; the newspapers of Dayton to support in this movement to nominate a "Citizens' Ticket," instead of supporting party tickets.

Another thing clearly needed to be done is to demand the resigna-

tion of certain seven or eight members of the Council who are a detriment to the city. I understand that the Council reorganized a few months ago and that seven or eight members are in control of all the important committees, and one man boasts that he controls eight members of Council, and that these men defy public opinion, and have pledged each other to stick together for the passage of certain measures which are not for the best interests of Dayton. The members of the Booster Club know who these men are and should demand their resignations. How long can they remain in office if the people of Dayton are sincere about wanting better officials?

Organize a vigilance committee which will look after the interests of the city and see that fair play is given to everyone—this committee to prosecute unfair officials, and to make public wrongful acts of these officials. The mayor should appoint an investigating committee to investigate the action of the City Council and other public officials. I will pay one thousand dollars personally toward the expenses of such a committee.

More effort should be made to put down crime in Dayton. We should have and could have the most efficient police force of any town in the country. Our county and state officials should cooperate to punish criminals and we should not have the awful spectacle we have had recently of county and city officials not working together to locate and punish criminals. I learn that there are more murders in Montgomery County than in any other county in the state, and that there are three men now awaiting execution in Columbus for murder committed in Montgomery County.

It is cheaper to form the characters of young than to try to reform the adults. We need a higher public sentiment in Dayton. We need better schools and a greater variety of practical things taught in them, such as domestic economy in all its branches, cooking, laundering, marketing, gardening, home decorations, commercial and manual training.

About eleven years ago at the anniversary of Dayton I gave a talk on what should be done to improve Dayton; this talk was afterward printed by the Board of Trade. I had hoped that the churches would take it up and at least make some effort, but they have not done so. They should be aroused now to correct public feeling in favour of all good things which would help Dayton, and to put down all things

which would hurt Dayton. If they would only do what Christ would do if He were to come to Dayton, Dayton would occupy a different position in the public mind.

I wish to say again that this is too important a matter for Dayton and for The N. C. R. Company to waste any words in compliments or resolutions, in music or speech-making, and I insist that all of these things be eliminated, as things of that kind will not influence the situation one way or the other.

Doing good gives us more pleasure than anything else that we can do, and all the suggestions I have made have been for the purpose of doing good to Dayton and her people.

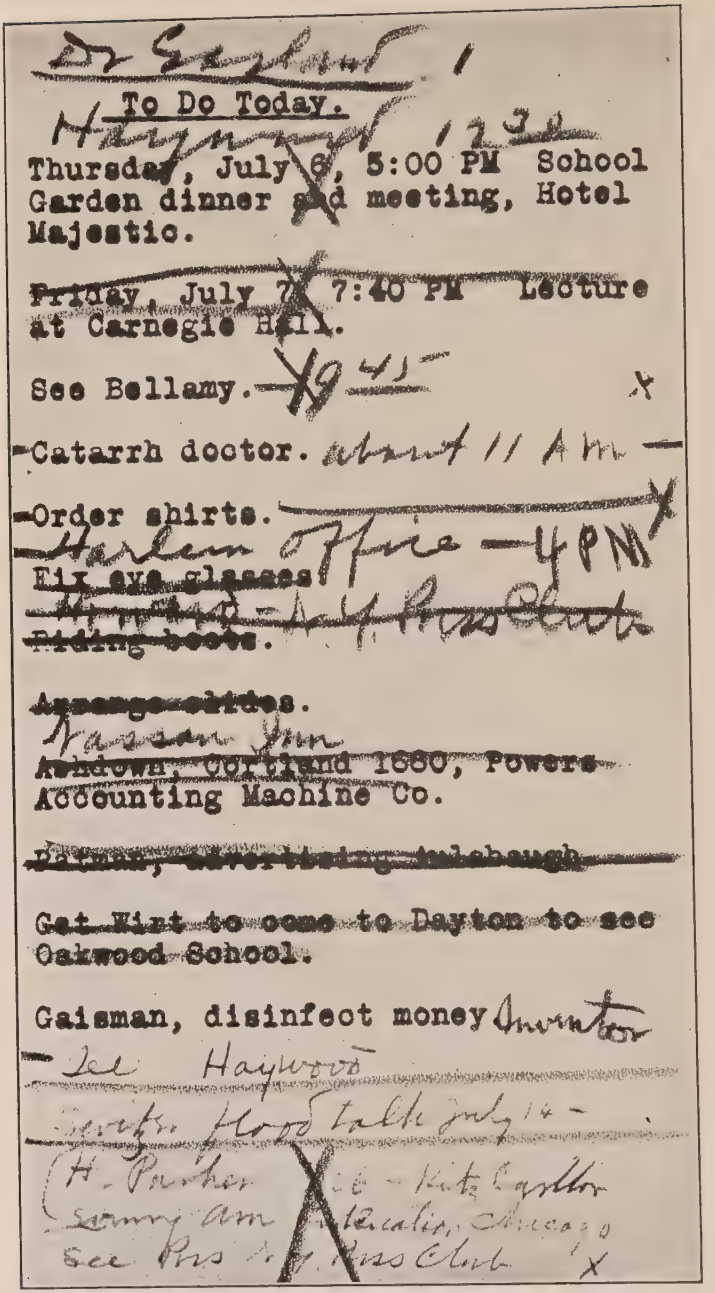
Now, I think it is my duty to go to some other city where the public sentiment will be more easily influenced for good and make it possible to accomplish more good. I have been unable to get people to agree with me in Dayton, or exert sufficient influence to get the people to do what they should do for the interests of all of her people.

It is not possible here to write the whole social history of Dayton, and that would have to be done if all the work of Mr. Patterson were to be reviewed. But it is possible to summarize some of the more striking features and of these none is more important than his work with children. Mr. Patterson took it that the cheapest way to train a man was to start him right as a boy. Therefore his largest concern always was with the children. He did not much like to have children around him—he was a strange man who preferred to be impersonal in his actions. Yet the grounds of his house at Far Hills were always open for children to play about in and on Sundays he always had cakes and toys for the youngsters who came in—and they came by hundreds. He did not regard his estate as his private property—he looked on none of his land as private property and he never put up a fence anywhere.

He saw that the children of Dayton had few places in which to play and those only of the dirtiest. Neither

THE OLD BARN CLUB

It was the personal property of Mr. Patterson, but he turned it over to public use in order to provide country club advantages for those who could not afford the usual high fees. The annual membership fee is one dollar.



To Do Today.

Thursday, July 6, 5:00 PM School Garden dinner and meeting, Hotel Majestic.

~~Friday, July 7, 7:40 PM Lecture at Carnegie Hall.~~

See Bellamy. ~~49 45~~

Catarrh doctor. about 11 A.M.

~~Order shirts.~~

~~Harlem Office — 4 PM~~

~~Fix eye glasses.~~

~~Riding boots.~~

~~Arrange sittes.~~

Waldorf Inn

~~Rendown. Cortland 1680, Powers~~ Accounting Machine Co.

~~Get Kirt to come to Dayton to see Oakwood School.~~

Gaisman, disinfect money Inventor

Ice Haywood

Sanitas Food talk July 14

H. Parker — Kitz Carlton

Sammy Am — Chicago

See Pres. Pres Club

MR. PATTERSON'S DAILY LIST OF THINGS TO DO

they nor their parents knew anything of beauty—of flowers, or home furnishings, or pictures. And there was no way that they could know. The boys were no worse than any other boys similarly brought up; they were savages and of course their energy was destructive. They thought that uprooting a shrub, cutting into a tree, or hurling a stone through a window were demonstrations of masculine individuality. A hero was a boy who hit the window he aimed at. Mr. Patterson thought he could find better amusement for them—and he did. Characteristically, he excused himself:

"We did it all from necessity. I want to impress on you that we did nothing here that we were not compelled to do. Every bit of our welfare work was done from necessity. It was all necessary in order to carry out what we proposed to do with the factory. We got the boys from around the neighbourhood and gave them something to do."

He had Saturday morning entertainments for children in the N. C. R. Schoolhouse, at which they were shown stereopticon slides or motion pictures, they heard good music, and they finished up each meeting with fruit and cake. But this was only to get the children together; Mr. Patterson had larger aims. He wanted to teach them how to play constructively and at the same time not only to learn the reasons for modern business, but also to bring about changes in their own neighbourhoods. Out of these thoughts sprang the "Boys' Garden Company" and the "Boys' Box Furniture Company." Take a contemporary report on the garden work:

First the indoor egg-shell garden was introduced to interest the child and instruct him in the principles of cultivation of the soil.

Then Mr. Patterson established for both boys and girls a system of gardening on a large plot of ground, each child being apportioned a section. The interest shown by the children, the recreation that they evidently found in this work, the change for good in the character of the neighbourhood which it effected, and the opportunity for instruction in business methods which the disposal of the harvest each year afforded to the coöperative company of boy gardeners led Mr. Patterson to hope that all the children of the city might be given the benefits of the cultivation of a small garden.

He induced the Playgrounds' Association of Dayton to enlarge the scope of its work and under the name of the Dayton Playgrounds' and Gardens' Association to assume the task of making the local endeavour at the National Cash Register plant a city-wide movement. Needless to say, Mr. Patterson assumed a large share of the expense of this department of the Association's work. With the help of the schools the children's interest in gardening was aroused, and talks by the teachers and circulars published by the Association gave instruction and direction. A city-wide contest for the best gardens was announced and so a great many children were induced to give their names as prospective gardeners. Seeds were given free to the children the first year. They were also presented with a diagram showing how a plot of ground, 10 ft. by 20 ft. in the backyard, should be laid out, and directions for hoeing, furrowing, and sowing were appended. About fifteen hundred children entered this contest the first year, though only three hundred continued to the end of the season.

As a further means of directing the activities of the children in the backyard gardens, there was established in each school district a Model School Garden on vacant lots near the schools and loaned by the owners. These model gardens were cultivated by a number of picked pupils of each school under the direct supervision of a trained gardener. This gardener had a schedule of visits at certain hours to each of these gardens, so that, if any child working in a backyard garden had any difficulty, he had only to go to the model garden of his district at the hour of the gardener's visit to get direction and suggestion. Since the second year of the Association's activity in gardening, inspectors have been employed who visit each backyard garden and each model garden at least once a week and assign marks

and keep reports not only for the neatness and cultivation of the garden but also for the general appearance of the surroundings. It is estimated that in the season just finished the children raised produce in backyard and model gardens to the value of $8,700.

Then the Playgrounds' and Gardens' Association began a campaign for the cultivation also of vacant lots. This not only removed the unsightly places which had been overgrown by weeds, but also gave many a poor family a chance to grow its own vegetables and lay away potatoes and put up preserves for the winter. Permission was obtained from the owners of the vacant lots to have them cultivated each spring and then the Association connected those who registered for a lot with one offered for that purpose in the neighbourhood. The city authorities paid for the ploughing of six hundred lots and the society for all those above that number. The average cost of ploughing last year was one dollar a lot, this year somewhat over a dollar. Last summer 965 vacant lots were cultivated and the estimated amount raised was worth over $20,000.

At the Montgomery County Fair exhibits of the various vegetables raised by the children in backyard and model gardens have been shown and prizes offered by the County Fair Board for the best exhibits. The Association itself offers blue, red, and yellow ribbons for the children who are shown by the inspectors' report and marking to be worthy of first, second, or third class. The city government has set aside special market stalls where the children gardeners can, free of charge, dispose of their produce.

In five years of work in the line of children's and adults' gardens the Association has developed the interest in gardening to the extent that last year 1,700 children cultivated backyard gardens, 800 children worked in model gardens, and 965 familes farmed 965 vacant lot gardens. The community at large has become interested, too, and the Greater Dayton Association, which is Dayton's commercial, civic, and welfare organization combined, arranged periodic visits of inspection to these gardens in which many prominent men and women took part.

It has been said that Dayton's backyards are prettier and neater than most cities' front lawns. It is recognized that the unsightly spots of our city have been greatly reduced in number through the gardening movement. Gardening has become one of the appreciated

forms of recreation to Dayton's children and adults. And all this has been accomplished through the vision of John H. Patterson.

The Boys' Garden Company working on the land of the company was a real corporation. Mr. Patterson planned its organization in his usual pyramid style under five headings—he instantly set out to gain the commercial interest of the boys. This is the organization as he developed it:

History: The N. C. R. Company realizing that the boys of the community must have something to do to keep them out of mischief, secured Mrs. Harvey, a settlement worker. A community house was opened and classes in wood carving, clay modelling, and drawing were opened for the boys. This proved so interesting that the egg-shell garden movement was started. The boys took so much interest in this that in the year 1897 a plot of ground near the factory was cleared and used as a garden plot. Here the ringleaders of the boys were put in charge and the boys received their first lesson in garden work.

Organization: Stock company incorporated under the laws of the State of Ohio, August 10, 1910. Stockholders and board of directors' meeting third Thursday of each month. $50 capital stock, $40 paid up stock. Eighty stockholders at fifty cents per share. $100 in cash prizes distributed each year. Working hours: 6:30 to 7:30 a. m., 4:00 to 5:15 p. m. Boys of the age of 10 to 12 years can be members. An instructor is in charge to help the boys and to see that the work is properly carried on.

Purpose: To keep the boys out of mischief and to give them outdoor exercise, build up the body, making them healthy boys. To learn the value of work. To learn the value of coöperation. To be able to plant seeds right. To get a knowledge of vegetables, seeds, care of ground, and best season in which to plant same. To furnish food for the table. To take care of tools. To plant the rows from north to south. To take care of the little things. To teach a boy to be industrious and exact in the cultivation of a garden.

Material: Ground: Plot 12 x 53 feet to each boy; each plot is numbered. Tools: Hoe, rake, wheelbarrow, cultivator, spade, planting stick, pint cups for seeds. Each tool is numbered the same

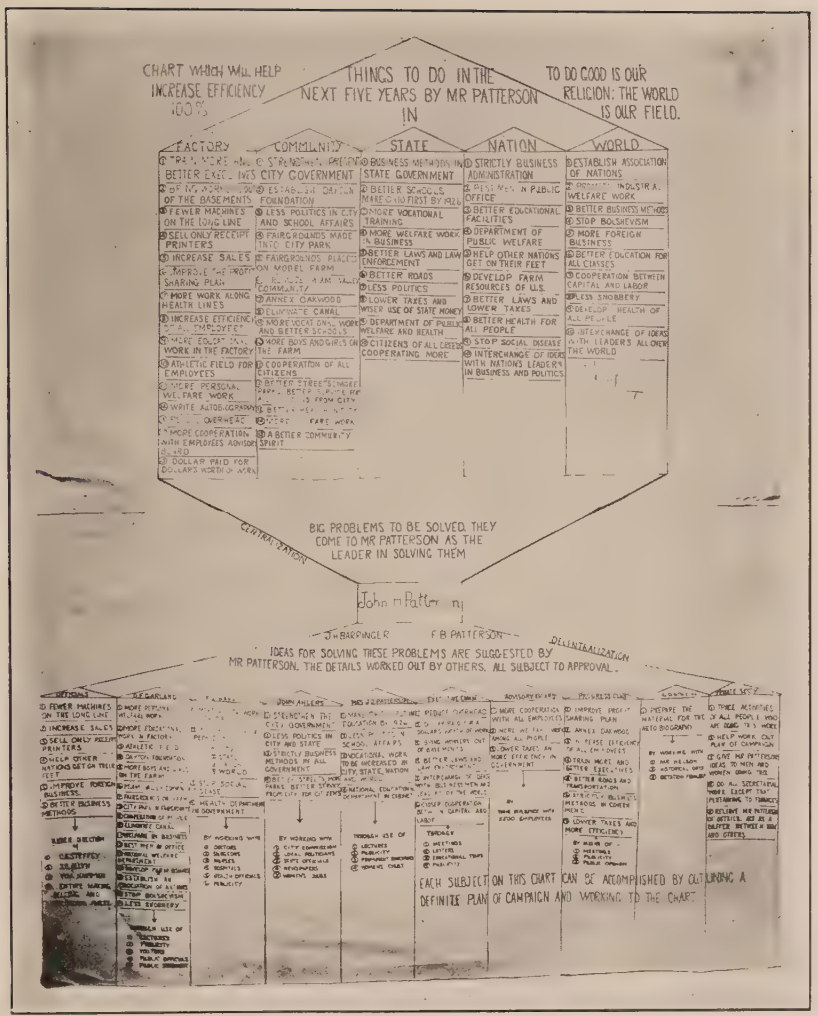


CHART WHICH WILL HELP INCREASE EFFICIENCY 100%
THINGS TO DO IN THE NEXT FIVE YEARS BY MR PATTERSON IN
TO DO GOOD IS OUR RELIGION: THE WORLD IS OUR FIELD.
FACTORY
COMMUNITY
STATE
NATION
WORLD
BIG PROBLEMS TO BE SOLVED. THEY COME TO MR PATTERSON AS THE LEADER IN SOLVING THEM
CENTRAL STATION
John H Patterson
J W BARRINGER
F B PATTERSON
DELINEATORIZATION
IDEAS FOR SOLVING THESE PROBLEMS ARE SUGGESTED BY MR PATTERSON. THE DETAILS WORKED OUT BY OTHERS. ALL SUBJECT TO APPROVAL.
EACH SUBJECT ON THIS CHART CAN BE ACCOMPLISHED BY OUTLINING A DEFINITE PLAN OF CAMPAIGN AND WORKING TO THE CHART.

A CHART OF "THINGS TO DO"

"When something was finished, Mr. Patterson crossed it off his chart and went on with the next thing. And when he died his chart was fuller of things to do than at any time before in his life."

FREDERICK B. PATTERSON

A year before John H. Patterson's death in May, 1922, he retired from the presidency of the N. C. R. Co. and became chairman of the Board of Directors, his son Frederick taking his place as president

as the garden plot; this makes it easy to keep tab on each boy. Seeds and plants: Beans, beets, cabbage, carrots, cauliflower, celery, lettuce leaf, eggplants, endive, kale, kohlrabi, lima beans, mangoes, onions, parsnips, peas, radishes, spinach, tomatoes, turnips, celeriac, salsify, potatoes, head lettuce. Books: To keep account of the vegetables raised and sold. Hotbeds: Plants are started.

Results: The boys learn: Value of a dollar. To work. To be precise. To overcome difficulties. To coöperate. To be generous, kind, obedient, and truthful. Over $2,000 worth of vegetables raised in 1918. Home tables supplied with vegetables, remainder are sold, money is banked and cash dividends are declared each year. By rotation, three crops can be raised in one year. Better class of boys for the uplift of the community. Gives the boy a good training in selling and the care of vegetables and flowers. A diploma given to each boy at the end of a successful two-years' course. This is a good recommendation for a position at the factory in the future.

Following the Garden Company came the Box Furniture Company to provide work and amusement in the winter months. This, too, had its pyramid which fully explains its operation:

Organization: Incorporated under the laws of Ohio. Board of directors hold monthly meetings. Factory and salesroom, L. Street near Brown. Average number of boys at work, 21. Boys must complete two seasons in the Boys' Garden Company before entering the Box Furniture Factory. Age of boys, 11 to 15 years. Dividends are distributed according to the number of hours at work. Each boy receives from $4.00 to $10.00 in an annual dividend. Under the supervision of the Welfare Department. Cash dividends for the year ending December 31, 1917, $205.33.

Object: Teaches the boys: To use carpenter's tools. To build useful furniture. To make repairs about the house. To be accurate with the eye and the hand. To be thorough. The value of work.

Instruction: All the work is done under the supervision of an instructor. Hours for work: 4 p. m. to 6 p. m. Saturdays, 8 a. m. to 10 a. m. Summer vacations, 3 p. m. to 5 p. m. Boys are taught the use and care of: Saw, plane, chisel, vise, hammer, mitre box, compass,

brace, bit, drill, and square. Teaches the boys to: Lay out work; prepare material; cut, plane, and join; smooth and finish; stain; varnish; and enamel.

Materials: Poplar and yellow pine are obtained from the boxes and packing cases discarded at the N. C. R. factory. Rough lumber is shaped by a band saw used by the instructor. Hardware: Nails, screws, brass, iron, hinges, knobs, and other fittings. Paints: stains, shellac, varnish, and various coloured paints.

Product: The furniture is sold through catalogues, samples, and salesroom, by the boys and the instructor. Furniture regularly made: Bookcases, tabourettes, pedestals, sewing stands, children's furniture, medicine cabinets, wastebaskets, footstools, shoe blacking stands, flower boxes, and bird houses. Special orders are received for, clothes chests, telephone stands, desks, trellises, and similar articles of furniture. Finishes: standard (dull dark brown stain), white enamel, mahogany, gloss, and green.

In a memorial sermon delivered by the Rev. Dr. D. F. Garland, the Director of Welfare of the N. C. R. in 1923, on the anniversary of Mr. Patterson's death, he summarized what Mr. Patterson did for the children of Dayton and of the country at large, and it is well worth quoting, for in the broad view one can place the work with the children as an achievement even larger than the building of the N. C. R. itself. Said Doctor Garland:

"Mr. Patterson understood human nature. He realized that as the twig is bent the tree inclines; that you could do little with the adult portion of the community in changing its fixed ideals and habits of life. Therefore, he took the long look ahead, and centred his influence, his leadership, and his marvellous teaching ability upon the children of his time. He had learned the lesson so ably taught by the Galilean Master, who one day set a child in the midst of a great company and said, 'Of such is the Kingdom of God.' 'And whosoever shall offend

one of these little ones it were better for him that a millstone were hanged about his neck and he were drowned in the depth of the sea.' I think it is safe to say that no man who has ever lived in our community contributed as much to the present and future well-being of children as John H. Patterson. The time will not permit me to recount all that he did, but I wish briefly to state some of the outstanding services which he rendered to the children:

"1. He established the first boys' garden in the world, where boys were taught the value of work, the value of money, the sources of wealth, and the principles which develop character.

"2. It was at his suggestion and under his direction and with his financial aid that the Patterson School established the first school garden of America. To-day there are thousands and tens and hundreds of thousands of children planting seed and cultivating the soil in these United States. He did this when no one else thought of it, and in the face of criticism and ridicule.

"3. It was at his suggestion and with the use of money secured through the Welfare Department of the National Cash Register Company that the first cooking centre in any public school in Dayton was equipped in the Patterson School. Mr. Patterson financed this school himself. This experiment resulted in the introduction of domestic science into one school after another in Dayton until now all the children of our schools have an opportunity to learn the principles of domestic science.

"4. The children's friend was also fairy godfather to the little group of children years ago who were trained by Mr. Yahreis in orchestral music. We have to-day on our stage a few of the children's orchestras. This is a result of his far-sighted thoughtfulness and generosity.

"5. Mr. Patterson was also responsible for the introduction of the first public school kindergarten in Dayton through the gift of a complete kindergarten equipment. From this others sprang up until now every school has its kindergarten.

"6. Mr. Patterson planned and financed the first playground and garden association in Dayton. It was through him that this splendid service which the children of Dayton now enjoy was established nearly a quarter of a century ago.

"7. Time will not permit me to tell the story of how Mr. Patterson thought and planned and organized and battled, at great odds, against opposition, to secure better city government, better public health protection, and a better system of education for Dayton in the interests of growing childhood. He realized that the children would have no chance in the future if the Government was corrupt, if the educational system was inadequate, if protection against disease was not given.

"8. The first community centre for adults and children he established near the factory, and from this has come more than a score of community centres and improvement associations in Dayton."

The number of clubs which Mr. Patterson organized is endless. First he had them all through the factory and then he had them all through Dayton.

The Woman's Century Club of the National Cash Register Company was organized in April, 1896, as the result of a suggestion made by Mr. Patterson. At that time, Miss Amy Acton, a lawyer (it is said that she is the first woman lawyer ever employed by a large corporation), was in the employ of the company and through her leadership a permanent organization was effected. Self-

improvement and service were the principles upon which the organization was based. The motto of the club is "Onward, Upward." It is now one of the foremost organizations of its kind in Dayton. It is the first woman's club ever organized in a factory of factory women. It affiliated in 1897 with the State Federation of Women's Clubs and with the General Federation of Women's Clubs. It has a membership which varies from six to eight hundred, depending upon the number of women employees in the industry. The club meets regularly on the second and fourth Wednesdays of each month from October to June, inclusive. Meetings are held in the Schoolhouse beginning at 12:45 and lasting until 1:30. The members give fifteen minutes of their noon hour and the company grants thirty minutes of company time. The members pay annual dues at the rate of five cents per month.

The first neighbourhood club established by Mr. Patterson was the Rubicon Club, opposite the old Patterson homestead. As an outgrowth of this club, fifteen or more similar clubs were instituted throughout the city. A mothers' club movement which spread all over Dayton had its inception in the N. C. R. House of Usefulness. Mr. Patterson believed that clubs promoted social and business intercourse, understanding, and coöperation. He inspired the organization of the Dayton Woman's Club and largely financed the purchase of its fine clubhouse. In the factory he organized the Advance and Progress Club for executives, in addition to the Woman's Century Club for women employees, and the N. C. R. Women's Club for the women of N. C. R. employees' families.

The Old Barn Club was the personal property of Mr. Patterson, but he turned it over to public use in order to provide country club advantages for those who could

not afford the usual high dues. The annual membership fees are one dollar. This clubhouse is beautifully located and gives to its members all the benefits of a thoroughly modern country club.

Concerning the Old Barn Club he formed a characteristic pyramid showing how his mind worked on these matters:

History: The property of which the clubhouse site is now a part was originally acquired from the United States Government by Joseph Coleman, in 1815. Ten years later he sold the largest part of his holdings to Adam Coblenz. The property passed entirely out of the hands of the Coblenz heirs in 1886. In 1906 it was acquired by John H. Patterson. The farmhouse at that time was a plain brown frame with a porch both to the north and south. On the slope of the hill, to the west, and quite a little distance lower, stood the old "bank barn," probably nearly a hundred years old. The barn was removed intact and joined to the farmhouse on the west. Timbers were hewn from walnut logs, as now shown in the clubroom. The first floor of the barn was cleared of partitions and now forms the main floor of the clubhouse. The overhanging section of the barn was then enclosed to form a basement. Here are now located the Commissary Department and dining rooms. After the remodelling had been completed, the clubhouse became the home of the Dayton Automobile Club. In 1913 it was turned into the N. C. R. Girls' Club. In the spring of 1915 it was decided to reorganize the club into a community centre, and was known as the Hills and Dales Club until the spring of 1919, since then as the Old Barn Club.

Object: To supply a country club that everyone can afford to join. To promote friendship and unity among the people of Dayton. To bring Dayton and surrounding towns and cities into closer relationship. To get people out into the open air and sunshine. To provide a meeting place for all the people.

Organization: Managed by a board of governors. Board members elected annually. Meetings subject to call. Activities planned by Entertainment Committee. Membership: $1 for all persons over sixteen years of age.

Activities: Open to everyone living in the Miami Valley. Dancing every Saturday night. Assembly hall rented to members for special dances. Dining rooms—Three meals served each day. Dinner dances. Tennis. Croquet. Club meeting place. Parties. Picnics. Musicals. Sunday afternoon concerts at amphitheatre. Dormitory for women. Special entertainments free to members. Current-event talks. Educational talks. Moving pictures. Open-air camps. Swings. Rustic chairs. Beautiful shade trees. Ten-cent carfare.

Results in 1918: Total attendance—41,757; total membership—1,210; meals served—19,951; afternoon tea and refreshments—331; sleeping accommodations furnished to—3,119; Hills and Dales camp reservations—78; number using—3,120; Thursday afternoon programmes—21; attendance—1,365; Sunday concerts—9; attendance—3,102; club dances—23; private dances—2; church organizations entertained—36; clubs from surrounding towns—12; men's clubs—22; women's clubs—39; all operating expenses paid out of the club funds.

The Hills and Dales Park mentioned in the pyramid of the Old Barn Club is another of Mr. Patterson's gifts to Dayton. He bought the ground originally because he thought Dayton was building without regard to the provision of open spaces. He held it as private property but open to any one who liked, until 1918 when, being satisfied that the city was competent to care for it, he deeded it to the public. There is no other park quite like it anywhere. In part it is wild and traversed only by paths leading always to a shelter where a dinner or luncheon may be cooked over a wood fire, and in part it is laid out with good motoring roads and playing fields. It covers some 325 acres. Mr. Patterson's own pyramid is its best description:

History: Land used for club was part of a farm originally owned by Joseph Coleman, who obtained it from the United States Government in 1815. Sold to Adam Coblenz in 1825. Transferred to

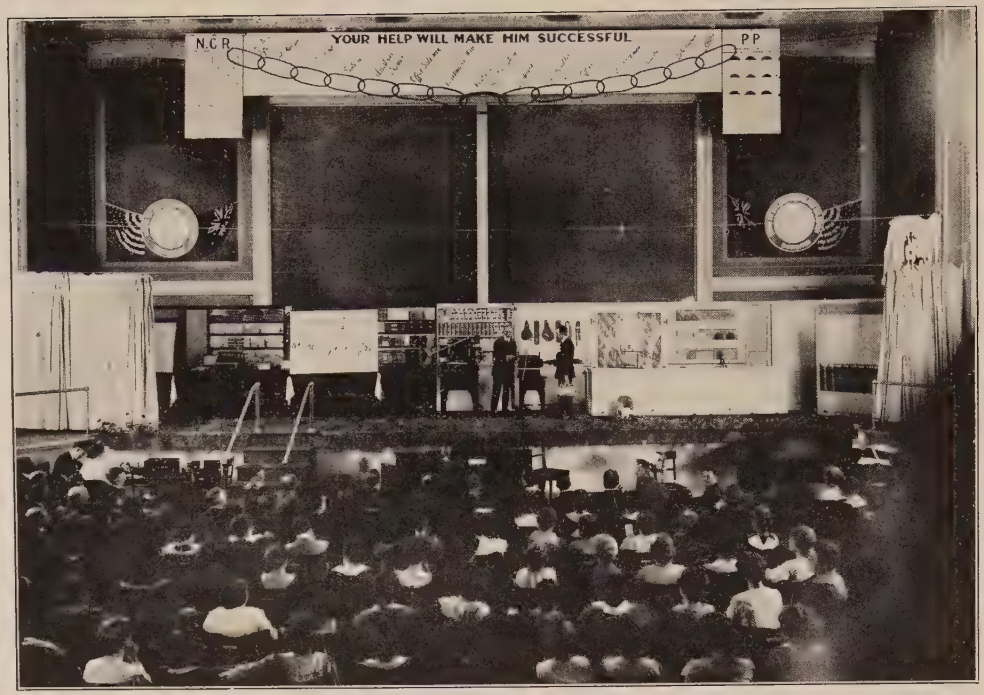
George W. Silzell in 1886. Acquired from Silzell heirs by John H. Patterson in 1906. Girls' dormitory converted from "bank" barn. Men's clubhouse was a field barn. Dance hall was an aeroplane hangar. Original club open only to officers, department heads, supervisors, foremen, etc., organized in 1911. In 1913, all employees invited to become members. No dues. 1914-1916, governed by committee of employees. 1917-1918, opened to the public under Department of Welfare, City of Dayton. 1918, deeded to City of Dayton 294 acres, by John H. Patterson. Dedicatory exercises held June 8 and 9, 1918.

Purpose: To provide outdoor recreation, amid pleasant surroundings, for all citizens of Dayton. To provide a social centre where all may meet on a democratic basis. To develop good feeling among the citizens of Dayton. To foster the spirit of coöperation. To provide a place where citizens of Dayton may meet in a social way. Open season from May 1 to October 1, or until snow stops outdoor activities.

Organization: Managed by a governing board composed of representatives of the citizens of Dayton. Board members are elected annually. Meetings are held monthly during the season. Programmes, activities, etc., are planned by the governing board. Club manager, employed by, and administers affairs under direction of, the Department of Welfare, City of Dayton. Fifteen employees. Dues —General membership including golf, tennis, locker, Men $12.00. General membership including golf, tennis, locker, Women $6.00.

Activities: Outdoor recreation—Three baseball diamonds; ten tennis courts; eighteen-hole golf course; volley ball; polo; basket ball; quoits; children's playground; wading pool; and sand piles. Athletic contests. Organized play for children. Band concerts. Dancing. Men's and women's clubhouses—55 beds for men; 24 for women; 25 cents a night. Reading rooms. Pool and billiard tables. Showers, lockers, and dressing rooms. Refreshments—Cafeteria lunches served Saturdays, Sundays, holidays, and special days. Ice cream, milk, soft drinks, and candies sold every day. Special programmes scheduled for Saturdays and holidays.

Results in 1918: Total Attendance—153,000; Sunday-school picnics, number—16; attendance—6,900. Catholic Federation Socials, number—12; attendance 9,000; picnics by schools—3; employees



A CONVENTION OF SALESMEN'S WIVES

In order to show them how to aid their husbands in making more money—an idea developed by Mr. Patterson during a period of business depression

MR. PATTERSON AT HIS DESK AT THE AGE OF 75

—11; lodges—7; societies—12; military—6; number—29, attendance 23,400. Playground picnic—number 1, attendance 1,000. Vacant lot and backyard garden picnic—number 1, attendance, 2,500. Camps —number of parties 750; attendance 12,400. Dances—private 11; Tuesday night 12; Wednesday night 6; Thursday night 12; Saturday night 19. All operating expenses paid out of City of Dayton general fund. These results show that a club along the lines of this one should be owned and operated by every city with good government.

It was Mr. Patterson's habit, whenever a good idea was suggested to him, to have an investigation started at once. No one knows the number of men and women he has sent to various parts of the world to report on some social-betterment plan that had been brought to his attention. He had competent people examine every phase of social work in Europe; no city in the United States made any large improvement in social work or in education without Mr. Patterson sending a representative. He hired experts in landscape gardening, in interior decoration—in everything; and he gave the results of their work freely to the community. Often he met with opposition because, once he had determined that some plan was good, he immediately went ahead to force its general adoption—regardless of the individuals concerned. That was his way —it was the way that he had with himself. If he were told that this or that was good for him he did what he was told, regardless of his personal tastes. In the course of time his attitude began to be recognized and respected.

I have not given his activities in anything like their entirety or at all in their chronological sequence. And also it is not possible to trace any of his various activities from their beginnings to their ends. For instance, he was the leader in establishing and supporting the "community chest" designed to regularize and take the graft

out of philanthropy. He also with his sister-in-law, Mrs. Carnell, and his nephew, Robert Patterson, established "The Dayton Foundation," providing a fund of a quarter of a million dollars, the income of which should be used to promote the benefit of the people of Dayton and the vicinity for all time to come. The Foundation is laid on the broadest possible lines, allowing for services of any sort which in the unfolding years may seem advisable and providing opportunity for contributions of the most modest size or in sums of millions. The beginning of this great fund was a letter written by Doctor Garland to a number of prominent citizens. Doctor Garland wanted to raise one hundred dollars to buy some pamphlets and to pay postage on letters to the end of establishing a community service. He sent out ten letters asking for ten dollars each. The next morning he received a check for one hundred dollars from Mr. Patterson and a note thanking him for bringing the matter to his attention. Little by little the work broadened until finally it developed into a great foundation devoted to public service.

But the work in which he probably took the largest pride was the establishment in Dayton of the City Manager form of government, for that represented not only the realization of a hope that he expressed in his 1896 address and provided a business government for the city, but also it represented a victory over the bosses who had for so long harried him. In 1912 Mr. Patterson sent Doctor Garland to Europe to study the government of cities. During the same summer he sent Miss Dilks, daughter of a former vice-president of the company, to New York to examine into the workings of the Civic Federation of which Mr. Patterson was a member. She fell in with the work of the New York Bureau of Municipal

Research. Fifteen minutes after she had reported, Mr. Patterson had made a pyramid for a Dayton Bureau of Municipal Research to be headed by Doctor Garland and to which Mr. Patterson would subscribe a thousand dollars a month—but his name was to be kept out of the whole affair. This bureau gained the support of the Chamber of Commerce and turned the minds of the more thoughtful citizens toward the evils of partisan government. An amendment to the state constitution permitted the cities to form their own kind of government within certain limits and took away the bossism of the legislature. Then Mr. Patterson, at first under cover and then openly, began to campaign for the City Manager Plan. He turned the full sales and advertising force of the N. C. R. into the fight and sold the plan to the people the way the cash register had been sold.

A citizens' committee, consisting of five persons, with Mr. Patterson as chairman, was appointed by the Chamber of Commerce to initiate a new charter. After a careful study of various types of municipal government this committee of five added fifteen others and later the group was extended to a committee of one hundred. Then an open meeting was held at which the various modern forms of city government were presented and explained. After a number of public meetings, the City Manager Plan was decided upon. A primary election, conducted through the mails, by the one hundred members resulted in the selection of fifteen of their number to become candidates for the Charter Commission. These fifteen men pledged themselves unanimously that if elected they would write a charter embodying the Commission Manager Plan, and would incorporate in it the following fixed fundamental provisions:

A commission of five, elected at large, on a non-partisan ticket and subject to recall. A city manager selected by the commission, in whom would repose all administrative duties relative to the government of the city. A referendum and protest on all legislation.

The charter would insure the greatest welfare of the citizen body and at the same time prevent factions politically or otherwise from conserving their own interests. This act of pledging candidates to the Charter Commission through a definite scheme of government was a notable contribution to charter planning. It meant that the people at the polls could determine in their choice of a charter commission a definite programme for the charter itself, and therefore made the issue perfectly clear. Then the N. C. R. began to function with posters, hand books, pictures, and diagrams. They taught through the eye and they reached out for everyone. There were no great mass meetings; instead, scores of speakers spoke informally to little groups of voters in churches, in factories, at improvement associations, in the homes of citizens, or on the corners of the streets.

The fifteen men were elected at the polls by a vote of two to one against the combined opposition of two other sets of candidates both of which represented partisan politics. The charter was then carefully written without the waste of a moment of time, and without the disturbance of internal bickerings, because the question of a type of charter had already been determined at the polls. Following the writing of the charter, it was adopted by an overwhelming majority in August, 1913, and at the November election five commissioners were chosen whose term of service began January 1, 1914.

By this plan the legislative power is vested in a non-

partisan commission of five men elected at large by the people. This is a purely legislative body. Its duties cover all legislative functions of city government. It passes all annual appropriation ordinances; it enacts all police and public improvement regulations; it has authority to investigate the operations of any department of city government; it chooses and appoints the city manager. He is directly responsible to the commission for the entire administrative work of city government and it can dismiss him at will. The members of the Commission give only a portion of their time to city government, being required under the charter to meet not less than once each week. The salary fixed is $1,200 per year with the exception of the mayor who receives $1,800 per year. The commissioners act as a Board of Sinking Fund Trustees. They have power to create additional administrative departments to those provided under the charter and they may discontinue any department already created under the charter, or they may distribute the functions of any department at will.

The City Manager represents the Commission, and is the responsible executive head of the administrative department of city government. The entire administrative functions of city government are concentrated in him. He may be chosen from the citizens of Dayton, or from any part of the United States. He appoints his immediate subordinates and all other administrative officials under him. He is directly and personally responsible to the Commission, and through the Commission to the people for the entire administration of the city. He selects the heads of the five principal departments from citizens of Dayton or from outside the city. He may dismiss them at will.

Realizing that inefficient government is more often due

to the weakness of the method than to the weakness and dishonesty of public officers, the charter provides budgetary and accounting procedure in a fundamental law usually absent from city charters. The appropriation estimates are required to be carefully compiled by the City Manager from detailed information obtained from the several departments on uniform blanks. The entire expenses of the city are required to be most rigidly and carefully classified as nearly uniform as possible. Provision is made for the publication of the budget and a public hearing on budget estimates in advance of its approval and enactment into laws. The charter further provides that appropriations may never exceed the estimated income.

Mr. Patterson died twenty-six years after that address on How To Make Dayton a Model City—twenty-six years after his wild dream. What happened in the meantime? Here in parallel columns are what he asked to have done and what has been done:

The Plan	The Fulfilment
I. *In Education*	
1. Send delegations of teachers to model schools and conventions.	Being done.
2. Provide large number of kindergartens.	Established for entire city.
3. Establish industrial training schools to cover every phase of industrial operation.	A splendid beginning made at Stivers High School.
4. Establish manual training schools.	Being done.
5. Teach Domestic Science in schools.	Being done.
6. Provide evening sessions of schools.	This is done for adults.

The Plan	The Fulfilment
7. Found scholarships for study and travel.	Nothing.
8. Teach scientific farming.	Nothing.
9. Teach landscape gardening.	Nothing.
10. Sale of school books at cost through state agent.	Nothing.
11. Provide evening instruction for employees of all stores.	Being done in part.
12. Establish a system of libraries throughout the city.	Branches have been established.
13. Bulletin daily current events.	Being done in another way.

II. *In Industry and Trade*

1. The working day will be shortened.	Has been done.
2. Better-trained workmen will be developed.	This is in process of accomplishment.
3. Saturday half holidays will be given to all labourers.	This is general.
4. Secure more skilled artisans, and thus insure many new industries.	This is being realized.
5. Employers and employees will come in closer touch and will coöperate for mutual benefit.	This coöperation is being secured.
6. Women will quit work a half hour before the men.	Done.

III. *In Government*

1. The city will be viewed as a great business enterprise, the people being the stockholders.	This result is attained.
2. Our complicated American system of city government will be changed to a simplified system.	City Manager Plan in operation.

The Plan	The Fulfilment
3. City government will be conducted not by partisans, but by men skilled in business management and social science.	This is now being accomplished.
4. The city political "boss" will be abolished.	Done.
5. Large amounts of money will not be spent until the amount and purpose have been previously announced to the people.	New charter provides for this.
6. The sale of all city franchises will be made to the highest bidder.	Done.
7. All city rents and city privileges will be sold, not given away.	Done.
8. Organize a Monitor Club of disinterested, responsible citizens to watch and study city government and report to the proprietors of the city, namely, the people.	Bureau of Municipal Research established 1912.

IV. *In Social Reconstruction*

1. Improvement associations will flourish in the new Dayton.	Entire city organized in such associations.
2. Provide free comfort stations.	Done.
3. Provide free baths for the people.	Bomberger Park, Wayne Ave. Market House for winter and summer and Island Park for summer service.
4. Provide free conservatory of music, art gallery, and art school.	Civic Music League, a pronounced and unusual success. Art museum established.

The Plan	The Fulfilment
5. Furnish loan exhibitions of valuable paintings and offer them free to the public.	This is done annually.
6. Provide Botanical Gardens.	The Municipal Greenhouse offers a beginning.
7. Provide a Zoölogical Garden.	Nothing.
8. Philanthropists will provide money to loan the poor at reasonable interest charges.	The Provident Collateral Loan Company organized 1915.
9. The drama will be elevated.	The Drama League organized 1914.
10. The churches will reach out to the people; not fighting old ideas, but helping to solve world problems.	This progressive spirit is becoming more and more dominant.
11. All vehicles provided with pneumatic tires to reduce noises.	This is being accomplished.
12. A competent Board of Health will be provided.	A Health Officer on full time with 46 assistants provided January 1, 1914.
13. Schoolhouses will be built on hygienic principles.	Done.
14. Provide a municipal hospital for infectious diseases.	Nothing.
15. Streets will be kept clean; washed down at night, as in European cities.	This has been done since 1914.

V. *In City Beautification*

1. The centre of the city will be given up wholly to business.	It is.
2. The residences of the people will be found scattered far out among the hills.	Being accomplished.

The Plan	The Fulfilment
3. Special rates of fare given workingmen at certain hours to encourage living out in the open spaces.	Now going on.
4. Dayton will cultivate the beautiful in her homes and buildings.	Being done.
5. Flowers, trees, vines, and fountains will grace the city.	Dayton is becoming more and more the city beautiful.
6. Main Street will be parked in the centre like Unter den Linden, Berlin.	This found undesirable.
7. There will be parks and boulevards all about the city.	The Olmstead Park plan prepared and private citizens and the city are establishing large park developments.
8. The Miami River will be a lake and its banks become parks.	The Olmstead plan so provides.
9. The Fair Ground will be beautified and devoted to the use of people rather than horses.	This is not yet realized.
10. All wires and pipes will be laid underground.	This is in the way of complete accomplishment in centre of city.
11. No smoke will defile the city.	Reduced to a minimum.
12. The city will be better lighted.	The boulevard system and increased and better light are being provided.
13. All vacant lots will be used for flower gardens or vegetable gardens or playgrounds.	Many are so used.

He did—although it took him a quarter of a century—what he started out to do.

CHAPTER XX

THE MAN AND HIS WORK

JOHN H. PATTERSON dreaded above all else the coming of a twilight into his life. He feared to sit still and wait and wait to die. He wanted to die working—not waiting. It was not that he was afraid of dying; he was afraid of not being able to do his work. For as he grew older his interests broadened, and he found more and more things to do or have done.

He could not tolerate the sort of man who amasses a fortune, calls himself successful, and retires to bask in the light of past performance. When something was finished, Mr. Patterson crossed it off his chart and went on with the next thing. And when he died his chart was fuller of things to do than at any time before in his life.

The last ten years of his life were his fullest years and they were devoted almost wholly to public service. Between the age of sixty-seven and his death at seventy-seven John H. Patterson reached maturity. It is to be remembered that he started late—that he was past forty before he took on the N. C. R. He fought, and he worked night and day against odds almost impossible to realize. Often, had he admitted to himself the possibility of being bankrupt, he would have been bankrupt. Not recognizing failure, he could not fail. He expected obstacles and it did not make much difference what kind of obstacles at the moment stood in his way—he had accustomed himself to dealing with all kinds.

But as he grew older he had the opportunity to give more of his life to public service than to the company; he knew the company and conditions so thoroughly that he could dispose of its affairs in less time than formerly. A year before his death he retired from the presidency and became chairman of the Board of Directors, his son Frederick taking his former place as president. But this was only a detail of organization. He knew that before many years had passed he must die, and he wanted the company to be administered for a while under his eye in such a manner that his death would not disturb the smooth movement of affairs. He was nearly as active as chairman of the company's affairs as he had been when president, but the new place which he made for himself gave a sort of titular freedom which fitted in with his conceptions of duty. He thought that the president ought to be more active in the affairs of the company than he then cared to be.

His desire was to do something more outside the company than he had done—the war had brought to him the thought that every man who could should work unceasingly for peace among the nations. He did not become chairman in order to give himself more leisure; he had no conception of leisure. He detested the "idle rich"; whenever he heard of a man building a palace or spending some great sum on a necklace, he usually drew a chart to show how much good that man missed doing by not devoting the money to education or to the saving of babies. He never bought an expensive painting in his life; he was not opposed to purchases in the interest of the public, but he spoke bitterly of those who would pay a quarter of a million for a canvas to hang in their own homes where only they and their friends could have the benefit.

He did not like to have money spent on him. The Hundred Point Club, shortly after its organization, began the custom of presenting him with some sort of a memorial at each convention. These memorials steadily became more expensive, and Mr. Patterson did not know what to do. He recognized that the men were making the presentations from the best of motives, but he had for many years prohibited gifts in the organization—ever since he found that foremen were exacting toll in the form of gifts from those under them.

For some years he accepted the gifts and had them placed in the factory museum, but in 1914 the club presented him with an oil portrait of himself that had cost about fifteen hundred dollars—and it was not a very good portrait. This stood on the stage of the Schoolhouse through the whole convention. Mr. Patterson had affected to be very much pleased. Actually he was in a quandary, for he was exceedingly particular about his portraits. On the last day of the convention he was giving a talk and, as usual, he had a piece of red crayon in his hand; as he warmed into his subject he covered pad after pad with diagrams, pictures, and pyramids. The painting was standing in line with the pedestal pads and Mr. Patterson, exhausting one pad after another, came to the painting and absent-mindedly continued his demonstration in red chalk on the portrait itself. The club members shuddered as they saw their work of art disappearing under the red chalk. But Mr. Patterson did not seem to notice what he had done. He was all intent upon making his sales demonstration. But before the next convention he issued an order that the rule about gifts from subordinates to those above them extended also to the president!

He abhorred useless ostentation—not because it was ostentation but because it was useless. He favoured any sort of a show that would convey a lesson—that would do good, that would make people better. He considered himself only a trustee of what he earned, and his expenditures had to be governed by the laws he made for his trusteeship. He expressed his whole theory of the use of money and of the function of the large corporation in pyramid form and it explains intimately how he shaped his life. This is the pyramid and his explanation:

Division of Profits:

$16,000,000 in Trust for the Five Pyramids Below:

Mr. J. H. Patterson, Trustee for the Five Classes Below. Judge, Jury, and Executioner.

Making: Officers. Heads. Assistants. Rank and file. The makers claim they should have most because they make them.

Selling: Officers. Heads. Clerks. Rank and file. Selling people claim theirs is the hardest work, and that they should receive the largest part.

Owners: Three Common Stockholders. 2½ per cent. Two hundred and thirty Preferred Stockholders. Dividend limited to 7 per cent. and can't be more. The three Common Stockholders want large dividends like other companies.

Charity: Missions, colleges, libraries, hospitals, churches, Y. M. C. A., universities, educational trip, parks for people, improvement associations. The world patronizes us and the world solicits charity from us.

World: A billion people are injured by the open cash drawer. The jails of the world are filled with the victims of the open cash drawer.

The three owners of the common stock are better for the people than three hundred owners—because the dividend can be smaller, hence, a large part of the profit can go to the other four above divisions.

If the $16,000,000 assets were divided among eight thousand employees it would equal $2,000 invested for each. This enables

each employee on an average to earn 50 per cent. on $2,000, i. e., $1,000 yearly.

Common stockholders receive only 2½ per cent. dividend on $9,000,000, which equals $225,000. The increased profit stays in the business and enables us to increase the business and do more good to all the five divisions. Any division among the other four pyramids, such as increase or decrease of wages or commissions, does not affect the yearly 2½ per cent. paid to the three common stockholders.

J. H. Patterson is acting as manager of the N. C. R. for the people of the world, his dividend of 2½ per cent. amounts to $123,700. Part of this is spent on Hills and Dales. He gives to deserving but unfortunate employees and to others. He keeps only enough for his board and clothes and necessaries for himself and children. He has no outside investments except Hills and Dales which the people enjoy with him. On his last trip he can take nothing with him, as shrouds have no pockets.

The object of The N. C. R. Co. is to stop the open cash drawer—to sell at lowest prices and benefit the billion.

National Cash Registers are the lowest-priced machinery sold in the world.

All this applies to coal, iron, oil, food, publication, and transportation and all other things necessary for the good of the people.

The masses of the people pay the taxes—as taxes increase, rents increase. The users pay the rents, taxes, and duties on all they buy.

"Shrouds have no pockets" was one of his favourite expressions. He never made an investment outside of the company until the war came with the offerings of Liberty Bonds. He did not consider those bonds as investments at all; he did not buy them as investments; he would have been glad not to have had them bear interest. He took them as his contribution toward the expense of causing the nation to endure. For he was completely an American.

And as an American he threw himself into the war. He thought that the Allies were right and Germany was

wrong and he wanted the United States in the war long before we entered. He said that if German militarism had to be suppressed for the safety of the world, the task had best be taken on quickly. He hated war with all the intensity of his nature, but he thought that this war might end war. He refused to accept any war contracts from the belligerents before our entry. He would not permit the factory to be in the class with a mercenary. This was against his financial interest, for the outbreak of the war abroad shut off his foreign business which was then very large. The business in Germany and Austria had been the most important, next to the domestic business. All of which meant absolutely nothing to Mr. Patterson in his attitude toward the Central Powers; he never let his personal interest compromise his sense of right.

Business at home dropped very rapidly in the months following August, 1914. Mr. Patterson met that depression as he had met every other depression—by drawing up a new sales plan, by holding conventions all over the country, by extending his advertising (Mr. Patterson always enlarged his advertising when business was bad for it was then, as he said, it was most needed), and by putting on sales pressure from every direction. One of the large ideas of this period was to hold a convention of the wives of the salesmen in order to show them how to aid their husbands in making more money. This is such a striking instance of ingenuity that Mr. Patterson's own description of what happened is worth while:

"Leaving business at the office sounds like a good rule, but it is one that can easily be carried too far because, to my mind, a man who intends to make a success should be

collecting ideas and tips, and mapping out programmes during every waking hour. Dismissing business after office hours has a nice sound, but I have found that often the business does not come back after the recess!

"We had devoted not a little attention for many years to the wives of the agents and made many suggestions as to what they might do to help their husbands. We had told of the value of nourishing food, good hours, and avoiding too much social diversion, while we had also given plans for mapping out budgets and coördinating them with income. A man who works on commission seldom realizes his fancied income; when he has a good week, he thinks that all weeks will have the same return; then he marks up to that figure his expenditures and the amount he imagines he is earning for the year. But all weeks are not good weeks and that salesman usually ends the year in debt and wonders why. A man in debt, pressed by creditors, does not work so well as the carefree man. We had sent out bulletins on all these points. Then, too, we tried to teach actual salesmanship to the women so that they might be able to suggest to their husbands; this we did through bulletins and local conventions to which the salesmen were asked to bring their wives. In New York we went so far as to organize a woman's club where the wives might learn all about selling cash registers.

"These plans returned some measure of success, but still the women did not get the enthusiasm that comes to the salesmen through actual contact with the organization. How best could we give them that enthusiasm—put the idea over in such a way that they would not forget?

"By holding a convention in Dayton with all the stage settings that enable us so dramatically to bring the selling force up on their toes! What had helped the salesmen

would help their wives. We asked them to come and without their husbands. I confess that some of us were a bit fearful that a number of them might be afraid to make the journey alone, but we need not have had that fear. Practically everyone we asked came, and for five days we had a riot of enthusiasm.

"I have been speaking of cash registers—directly of my own affairs—but in the principles which I have given there is nothing that does not apply to any kind of a business which involves the employment of salesmen. Nor need it stop at salesmen; the wives of factory and office workers can help their husbands to a large degree; what we have done with the wives of salesmen is only a start toward making a partner out of the wife of every man in our organization. Perhaps one of these days we shall be reversing the process and bringing in the husbands to show how they can help their wives!

"Now for the convention. I gave a blackboard talk. I drew two buildings; the one was our factory and the other the store of the prospective customer, and then I made a chain connecting them, each link representing a part of the organization. The middle link was the wife of the salesman. Then I spoke to them something after this fashion:

"'We want coöperation between the officers of the company, the agents, salesmen, office men, wives, and sweethearts, in order to increase our profits and naturally the profits of all others connected with our organization. I am sure everyone here wants his earnings increased. It will be up to the wife hereafter to double her husband's earnings—to double the amount of money he brings home and puts into her hands. You women are all on a high plane, on a par with preachers. You are

doing a lot of good, and you should be thankful that you belong to an organization of this kind.

"'Now we want you to feel that your presence at this meeting will help to improve the records of your husbands, and when you go away at the end of the week you will be more enthusiastic than you have any idea of at this time.'

"We adopted this convention motto: 'With your help he can succeed,' and then, from morning until night, we kept going. We showed the women films of how a register is made, took them through the factory and thus gave them the setting—the first step toward making a salesman is to show what is to be sold. Then we started to teach them the business. We had a playlet showing the right way to make an approach and a demonstration, another on what the register does for merchants, and a film on the troubles of a merchant and how to overcome them. All of this gave them an idea of what their husbands were up against during the day.

"Then we had an illustrated lecture on dress both for men and women. Of course that interested them, and incidentally we managed to impress on them the value of having their husbands well dressed.

"So many women fail to understand that a man's clothing is one of his big business assets and that almost anything else in the house should be skimped rather than the quality of his clothing. That is rather a delicate point to put over, but we tried to answer the question: 'Why should my husband pay sixty dollars for a suit when I cannot afford to pay that?'

"By that time we were ready for the big message of the convention, which we called: 'The Sales Managers' Message to Wives.' It was played in three acts. The first part gave the career of a salesman whose wife did not

help—who kept him out late at night, sent him down late in the morning, called him up during the day, took him away from business, and made him lose definite, concrete sales. That ended with the little money bag. Then we developed the big money bag—with the wife helping. The play was designed to put over these eight points:

"1. A salesman should have plenty of wholesome food—not too much, but enough—and it should be eaten under pleasant conditions.

"2. He should get enough sleep.

"3. He should start to work early because the more prospects he interviews the more sales he will make.

"4. He should frequently make demonstrations to his wife and then have her criticize, especially pointing out to him the use of long words the prospect might not understand.

"5. She should be on the lookout for good tips and keep two eyes open in stores so she can tell her husband all about the conditions.

"6. She should ask for a receipt with her purchases so as to encourage the use of receipt printers.

"7. She should not take him away from his work. If he has to demonstrate after business hours and that interferes with going to a theatre, she should insist that the social affair be given up and that business have the right of way.

"8. She should encourage him when he is ready to give up, because a wife can do more in the way of encouragement than any one else. And, by keeping in touch with the business of the company and all the sales literature, she can frequently give him many points.

"Did the idea go over? Let the facts speak for themselves.

"One of the older men had a deficit in his quota that was steadily growing larger. He had been a good man, but he seemed to be falling down and was really getting very near the ragged edge. His territory was not in a particularly agreeable section of the country, and for eighteen years his wife had refused to live there. She came to the convention; she heard, she saw, and she thought; she went home, packed her belongings, and moved into the formerly detested district, to be with her husband. More than that, she is helping him to make sales, and he has been turning in the best records of his career.

"A woman in the Middle West has dropped her housework and spends practically all of her time making trifling purchases in stores that do not have registers, or have old-style ones, and then taking the trouble to talk about the advantages of the newer systems. Her husband has doubled his best previous record.

"I could give dozens more cases of the results of that convention."

Mr. Patterson knew no caste excepting that based on ability. A good workman was better than a poor workman, a good salesman was better than a poor salesman, but only because he took it that the good workman or salesman was the man who had tried and the poor workman or salesman was the man who had not tried. He believed in the equality of effort, not of remuneration. A workman earning twenty-five dollars a week for good work stood just as high with him as an executive drawing fifty thousand dollars a year. When he found the office girls were holding themselves above the factory girls because they could wear better clothing while at work he put all the girls in the organization into white aprons so that

there could be no clothing distinctions. He would not permit one class of employees to tyrannize over another—which is the cruellest of all tyrannies. No employer could ever think of doing to workmen what they think up to do to one another. For instance, he found that the people had to walk upstairs to work in the morning at the factory because the engineers would not bother to get in ahead of time to start the power.

"I got there ahead of the procession," said Mr. Patterson, "and found the men and women all coming to work together at the same time. The factory was dark and dreary looking. No elevators were running. I asked the engineer what the trouble was. He answered:

"'Why, of course, we never run the elevators until the power starts.'

"'Well, indeed,' I remarked. 'You start the elevators and start the lights twenty minutes before the whistle blows to-morrow. And,' I continued, as he looked at me, 'don't say it; don't say it. I know what you are going to say, but don't say it.' So he just said nothing and walked away."

America entered the war. Mr. Patterson went into it as into a holy war—he, like many others, thought it a war to end war. He wanted to do many times as much as he was permitted to do. He considered nothing but war. He offered his plant, organization, and fortune unreservedly to the Government and he chafed bitterly under the red tape and bureaucratic pawing about which so delayed our getting down to real work. The day after war was declared, he called a general meeting and announced:

"We are at war. It is not the war of our Government. It is our war. We must all do our part. Business must

continue, for without business we shall not have money to loan the Government nor shall we have our organization ready to do any work the Government may ask us to do. But hereafter our motto shall be: *War first, business second—if there is any time for business.*"

The Government offered the N. C. R. a large number of contracts involving precise work such as shell timers, instruments for airplanes, and the like. The organization was shifted over to war work. The factory kept on making cash registers, but only to the extent that the work did not interfere with the Government contracts. So successful was the company in finishing its contracts that work on which other factories had failed was turned over to them and by the end of the war the place was almost wholly on a war basis. And all of this war work was on a fixed-price basis; Mr. Patterson refused absolutely to operate on cost plus—he said that he would not be put into the position of profiting out of possible extravagance. So in spite of rising costs, he took his chances on fixed prices and he was proud not to have made any money out of the country's necessity.

Only a part of his work was in the factory; he put the force of the N. C. R. advertising and methods into Liberty Bond drives, into Red Cross drives—into every drive. He looked after the families of the three hundred men who went out of the organization to join the colours—among them were his son Frederick and five other members of his family. He prepared several lectures illustrated with motion pictures and sent them out through the country; on a single one of these lectures he spent fifty thousand dollars in preparation.

The company ran heavily into debt; he did not care. He cared for nothing but the winning of the war; he

gloried in having something to give. For remember that he considered the N. C. R. as a public institution to create wealth in time of peace and to perform whatever service might be required of it in time of war. If the Government had told him that blowing up the whole place would help win the war, he would have blown it up within an hour of getting the message.

The war over, he turned to business again. He set plans afoot for building up the American business and then left for Europe to see for himself what had become of the foreign business. The conditions in the belligerent countries appalled him; he thought that President Wilson's League of Nations was the only hope of world salvation and he came home filled with the plan. He had a whole series of pyramids drawn on the basis that the League gave a method for managing the world on a business basis. He idealized the plan and he was deeply chagrined when the Treaty failed in the Senate.

Nevertheless, he supported General Leonard Wood, a League opponent, for the presidential primary elections in 1920, and when Senator Harding gained the nomination he worked and voted for him. He was a Republican, and although he thought that the Republican Party was wrong on the League he considered it more capable of governing than the Democrats. He blamed the League failure not on the Republican Party but on President's Wilson's method of presentation. He felt that the League should not have been tied up with the Treaty.

He was as enthusiastic over the Conference on the Limitation of Armaments as over the League. But he persisted in the thought that the United States ought to find a way to join the League. In the hope of finding a way, in 1920 he attended the session of the League at

Geneva. Day after day he sat at the sessions open to the public. He was chagrined that only America of the great nations of the world was unrepresented. He gave luncheons to delegates—hoping to get suggestions as to how the United States could be induced to enter. He spent much time with Lord Northcliffe and Lord Robert Cecil. He made many charts. He wore himself out. He cabled for Doctor Barr early in 1921.

"I found him," said Doctor Barr, "utterly worn out at Monte Carlo with his sister, Mrs. Crane. We remained on the Riviera until he was able to travel and then we returned to Dayton via Paris and London. But the strain had been too much for him; he was never quite so strong again."

Returning to Dayton he kept in bed for a time and then went to Battle Creek. He came back refreshed and ready to go to work. And he did work—not quite so long or so hard as before but enough to keep in touch with all the company affairs and the largest of his public plans.

Early in May, 1922, he decided to go to Atlantic City—every little while he enjoyed a week or two at Atlantic City. He was feeling particularly well and deeply interested in retaining McCook Field at Dayton as an aviation centre. On Friday, May 5th, he received Brigadier General Mitchell and Major Bane of the Air Service at Far Hills and went over his plans with them. Then he decided to start for Atlantic City the next day. On Saturday morning, before leaving, he called a meeting at his office to talk over the air-service plans and to get something in motion while he was gone. At the meeting was his son Frederick, who had served in the aviation branch during the war, Mr. Barringer, Doctor Barr, and Mr. Karr, the publicity director. Mr. Patterson as a result

of the meeting drew a chart defining the future operations. That evening he left with Roberts for Atlantic City. Doctor Barr was to follow later. Mr. Patterson said he felt so well that there was no reason for Doctor Barr to make the journey with him. The next day at noon, May 7th, Mr. Patterson and Roberts arrived in Philadelphia and boarded the one o'clock train for Atlantic City, getting on at North Philadelphia. He said that he felt tired and Roberts arranged him on the couch in the drawing room they had engaged.

"Mr. Patterson, you haven't had your lunch," said Roberts, "and there is no diner on this train. We shall have to eat something out of the basket." Mr. Patterson ate so little and his food was so special that a fitted luncheon basket was always part of the travelling equipment. "I will get something ready," continued Roberts, turning to the basket.

"But," answered Mr. Patterson, "you have not had your own dinner yet. . . ."

He gave a single short gasp. The light had been clicked off. He had fought a good fight. He had finished his course. He had kept his faith.

THE END

THE

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